APPENDICES:

IN THE 1990'S

A Guide and Assessment Tool for Lung Associations

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Now is the time for all good men to come to the aid of their fellow citizens
The road to glory is to strive to be what you wish to be thought to be

Tuberculosis Elimination Programming in the 1990's
A Guide and Assessment Tool for Lung Associations

PREFACE

Tuberculosis remains a serious problem in the U.S. in the 1990's—in fact, it is once again on the rise—especially in certain geographic areas and population groups. In particular, the HIV epidemic is having an increasing impact on tuberculosis. (See "Epidemiology of Tuberculosis" in Appendix.)

In April 1989, the Department of Health and Human Services Advisory Committee for Elimination of Tuberculosis (ACET) issued "A Strategic Plan for the Elimination of Tuberculosis in the United States,"1 toward the goal of eliminating TB in the U.S. by the year 2010. The American Lung Association (ALA) participated in the development of the plan and has a major role in its implementation.

Step one of the plan calls for "more effective use of existing prevention and control methods, especially in high-risk populations." Toward this end, Lung Associations, in concert with their public health departments, need to be knowledgeable about the scope and quality of local TB control efforts. This Guide -- a revision and expansion of the ALA "Guide for Tuberculosis Programming in the 1980's" – was developed by the ALA Technical Advisory Group on Tuberculosis Programming to assist Lung Associations in working with their health departments to assess current TB control programs. This assessment tool is designed to be used collaboratively by Lung Associations and local health departments to determine how their TB control program meets the standards outlined in this Guide.

A variety of other resources have also been made available by the ALA and ATS to assist Lung Associations in tuberculosis elimination efforts. Examples are ATS/CDC statements on tuberculosis diagnosis and treatment, an ALA/CDC tuberculosis education resource guide, and various ALA educational materials. (Consult the ALA Supply Service Catalog and the Desktop Guide to ALA Publications, or the lung disease care and education program specialists at the ALA national office.)

The ALA Technical Advisory Group on Tuberculosis Programming urges constituent and affiliate Lung Associations to use these resources, and, in concert with state and local health departments, strengthen efforts toward achieving tuberculosis elimination.

1CDC. "A Strategic Plan for the Elimination of Tuberculosis in the United States."

MMWR 1989,38 (Suppl S-3).
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INTRODUCTION

"The American Lung Association recognizes that whereas from 1953 through 1984, the number of tuberculosis cases reported in the U.S. annually decreased an average of five percent,

recently this long-term downward trend has stopped, and marked increases in tuberculosis morbidity have occurred in certain areas. These increases are primarily a consequence of tuberculosis occurring among persons infected with the human immunodeficiency virus (HIV). Among both HIV-infected and HIV-uninfected populations, tuberculosis continues to affect disproportionately the socioeconomically disadvantaged.

> The facts require the American Lung Association to continue its leadership role as an advocate for appropriate tuberculosis control activities, and to renew its efforts to eliminate tuberculosis."
>
> *Program Guideline enacted by the ALA* Board *of Directors, 1988*

In the late 1980's the ALA reaffirmed the goal of tuberculosis elimination and resolved to renew its efforts to eliminate tuberculosis. The ALA and its medical section, the American Thoracic Society (ATS), have participated in the development by the U.S. Department of Health and Human Services Advisory Committee for Elimination of Tuberculosis of a national strategic plan for tuberculosis elimination within the U.S. The following goals were established as part of this plan, published in 1989:

Interim Target: By the year 2000 the national case rate of tuberculosis will be no greater than 3.5 per 100,000 (1987 case rate was 9.3).

Elimination Target: Elimination (defined as a case rate of less than 1 per million population) will be achieved by the year 2010.

The strategy for elimination calls for a three-step plan of action:

Step 1. More effective use of existing prevention and control methods, especially in high-risk populations;

Step 2 The development and evaluation of new technologies for diagnosis, treatment, and prevention; and

Step 3. The rapid assessment and transfer of newly developed technologies into clinical and public health practice.

This ALA Guide and Assessment Tool is designed largely to help assess the degree to which the recommendations in Step 1 have been implemented in a given jurisdiction.

COMMUNITY TUBERCULOSIS ELIMINATION ACTIVITIES

A. Overall Planning and Policy

Tuberculosis elimination will require that most States and large metropolitan areas develop their own strategic plan. Each plan should be based upon the national plan -- necessitating familiarity with that plan -- but take into account the unique aspects of the local situation and local problems. Ideally, State and local plans should be developed by an officially appointed State or metropolitan area tuberculosis elimination advisory committee composed of public health, health care provider, and voluntary agency representatives. If they have not already done so, the local American Lung Association should request government officials to (1) establish such a committee and (2) develop a specific State (or city or county) tuberculosis elimination plan. (The previously noted 1988 ALA program guidelines on Elimination of Tuberculosis also encouraged Constituent and Affiliate Lung Associations to work with state and local health departments to develop local health plans to implement national strategies for tuberculosis elimination, and to meet regularly to assess progress.) Local ALAs and affiliated Thoracic Societies can work with public health officials to identify influential and appropriate persons representing the medical community and groups at risk for TB to serve on these tuberculosis elimination advisory committees.

The control of tuberculosis by State agencies is nearly always mandated by law, regulations and policies. These laws, regulations and policies direct health departments to ensure that effective tuberculosis case finding, case screening and patient treatment activities are being carried out. Each Lung Association should periodically review the laws, regulations and policies in its area to ensure that they are consistent with currently recommended medical and public health practices. Lung Associations, other voluntary agencies and medical care providers must provide health departments with strong and continuing support if tuberculosis elimination is to be achieved. Although the size and structure of tuberculosis control programs will vary according to the specific needs of each community, all community programs should include the components listed in the following sections.

B. Finding Cases and Infected Persons

Communities must have systems in place to ensure that persons with symptoms of tuberculosis receive appropriate examinations. Cases and suspected cases should be reported to health departments without delay to ensure that appropriate treatment and prevention interventions are rapidly applied. Health departments should monitor case reporting procedures and periodically review laboratory reports, pharmacy records, hospital infection control department records, AIDS registers and death certificates to detect delays or failures in case reporting. Lung Associations should work with health departments to review community TB data to identify groups of people in the community among whom aggressive case finding and prevention programs should be conducted. For these reviews, health departments should be able to provide data on case rates by age, race, sex, and country of origin, and TB data on special groups including the homeless, residents of nursing homes and correctional facilities, substance abusers, migrant farm workers, and persons with AIDS and/or HIV infection.

Lung Associations should make TB education material available to providers who report and/or manage TB cases or persons at high risk for TB, to TB patients and to community groups at high risk for TB. Associations and affiliated Thoracic Societies should consider sponsoring TB conferences and workshops for selected providers in conjunction with State or local affiliates of the American Medical Association, National Medical Association, American College of Chest Physicians, etc.

C. Tuberculosis Prevention

It is estimated that between 30 and 50 percent of TB reported cases could be prevented. Communities must initiate effective tuberculosis prevention activities including aggressive preventive therapy programs, contact follow-up activities, and design of activities to prevent infectious persons from spreading tuberculosis to others. Contact investigation should be initiated without delay for all contacts of sputum smear positive cases. Infected contacts and all contacts under 15 years of age should be considered for preventive therapy. Screening programs (usually TB skin test followed by chest x-rays for those with positive skin test) should be targeted to each community's highest risk groups.

Tuberculosis screening and prevention should also be conducted for staff of tuberculosis clinics, drug treatment centers, facilities providing care to persons with HIV infection, and correctional facilities and other health care facilities serving persons at high risk for TB.

Staff of hospitals, mental institutions and home health care agencies should be annually tested where infection prevalence exceeds 5 percent. Infected persons identified in targeted screening programs should also be placed on preventive therapy unless contraindicated. Twice-weekly, directly observed preventive therapy should be used whenever necessary to ensure compliance.

Consideration should be given to installing UV lights in high-risk facilities (e.g., prisons, facilities providing aerosolized pentamidine treatments, and homeless shelters) in order to kill airborne tubercle bacilli generated by persons with unsuspected TB. Hospitals that care for tuberculosis suspects should have respiratory isolation facilities in order to minimize TB transmission while the patient is still infectious.

Lung Associations should assist in promoting prevention programs through making TB education and training available to health care providers serving high-risk clients as well as through public education activities directed at high-risk communities.

D. Tuberculosis Treatment

Communities must take steps to ensure that persons with tuberculosis complete the recommended course of treatment. For each new case of tuberculosis, a specific health department employee should be assigned the responsibility for educating the patient, and for ensuring that the patient completes the recommended treatment. A specific treatment/monitoring plan should be developed by the health department and the health care provider for each tuberculosis patient. Tuberculosis drug, laboratory, and follow-up services must be readily available to every patient regardless of the patient's ability to pay. Twice-weekly, directly observed therapy should be used whenever necessary to ensure compliance. Lung Associations should advocate the appropriation of funds to support these activities. Quarantine facilities and procedures must be available for infectious patients unwilling or unable to comply with self-administered or directly observed treatment. Lung Associations should ensure that laws and regulations are in place to provide for such measures when necessary. Enablers or incentives should be available for patients who need special motivation or help to complete the recommended treatment. Many Lung Associations have assisted health departments in measurably improving compliance by underwriting the cost of small gifts, snacks, coffee, monetary incentives or awards for reaching therapeutic goals[1].

E. Development and Implementation of New Technology

The second step of the strategic plan for tuberculosis elimination is the development of new diagnostic treatment, prevention and control tools. Lung Associations can assist by encouraging and supporting quality TB research in local academic institutions. As new technology is developed, local ALAs must work with health departments to promote widespread adoption of the new technology. In the past, the medical community has been slow to adopt new and proven technologies, such as shorter drug regimens to treat TB or the use of directly observed therapy to ensure compliance. More recent technologies which have not yet been fully adopted include the six-month treatment regimens, and the use of enablers and incentives to improve patient compliance. For each new technology recommended for adoption, community specific strategies will have to be developed for implementation. Often, Lung Associations will have to play a key role in insisting that appropriate resources be made available to purchase the new technology, to educate health care providers, and to promote the use of the new technology.

F. Program Evaluation and Assessment

Program evaluation and assessment systems must be in place to assess the changing picture of tuberculosis disease and infection in the community, as well as to evaluate the effectiveness of public and private prevention and control efforts.

Evaluation and assessment activities should be written into the State or community elimination plan. Health departments should assess each new case and each tuberculosis related death to determine if the case or death could have been prevented and to design strategies to prevent future occurrences. Each State and major metropolitan area should develop and publish

an annual community TB program progress report and revised elimination strategy. Lung Associations will have an important role in helping to develop these reports and publicizing their major points. Health department tuberculosis control programs should be annually assessed by an outside expert group such as State or big city TB advisory committee, CDC, or by an ALA/ATS convened group. The assessment tool that follows is intended to help Lung Associations and health departments to carry out this annual evaluation.

[1]For example, see "Tuberculosis Control Enablers and Incentives," a booklet published by the ALA of South Carolina and approved for interstate distribution, 1990.

ASSESSMENT TOOL FOR TUBERCULOSIS ELIMINATION PROGRAMMING (Missouri Modification, 1998)

This assessment covers the period from January 1, to December 31,

I. OVERALL PLANNING AND POLICY

1. State or local community TB elimination advisory committee established?

Met: Yes_____ No_____ .

For hospital - Does the infection control committee address TB elimination?

Met: Yes_____ No_____.

Comments (Describe how the infection control committee addresses TB elimination): _____

_____

2. Is the local health department aware of Missouri plan for the elimination of TB?

Met: Yes _____No ____ _____

For hospital - Is hospital infection control committee aware of Missouri TB elimination plan?

Met: Yes_____No__ _____

Does the state or local TB control unit or hospital infection control committee have a policy and procedures manual on TB specifics?

Met: Yes _____No _____ _____

General comments by local TB control unit or hospital infection committee on the status or progress toward TB elimination:_____

3. Current ATS and CDC statements and recommendations (including the core curriculum) (a) are available and accessible to all health care providers and (b) have been given to providers serving clients at high risk for TB.

   (a) Indicator: Health care providers can obtain such statements from American Lung Associations.
   Met: Yes _____ No _____Partial_____

   (b) Indicator: For each statement, the appropriate providers in the community serving clients at high risk for TB have been identified and provided a copy of the statements/recommendations/core curriculum.

   Met: Yes_____No _____Partial_____

   Comments:_____

   _____

4. The medical profession, especially those serving clients at high risk for TB, is updated on the status of TB in the state, community or hospitals in a systematic fashion.

   Indicator: Evidence that appropriate target groups (e.g. members of local thoracic society and physicians who report cases, and the medical staffs of drug treatment centers, correctional facilities, migrant health centers, nursing homes, community health centers, HIV clinics and homeless shelter clinics) have been identified and are being reached at least annually via newsletters, announcements, articles, meetings, etc.

   Met: Yes _____ No_____Partial _____

   Comments: _____

   _____

5. Health care providers have access to and are aware of available health department services including: laboratory, treatment, free drugs, contact investigation, medical consultation, training and directly observed therapy services?

   (a) Indicator: Evidence that all these resources have been utilized without regard to ability to pay by patients when not under clinical health department supervision.

Met: Yes _____No _____Partial _____

(b) Indicator: Evidence that medical care providers are aware of and using the services, specifically - What is the evidence?

Met: Yes _____No _____Partial _____

Comments:_____

_____

6. Number of TB cases reported by private physicians and hospitals including the Veterans' Administration Hospital and managed care facilities:_____ .

7. Number of TB cases managed by the local TB control unit: _____; by other than the local TB control unit:_____ .

II IMPROVING SURVEILLANCE (FINDING CASES AND INFECTED PERSONS)

1. What is the percentage of newly reported cases reported within 2 weeks from time of diagnosis or suspected diagnosis or positive laboratory result obtained.

   Objective = 85% Actual _____(for cases reported_____to_____)

   Met: Yes _____ No _____.

2. (a) What is the percentage of patients who were co-infected (TB/HIV):_____.
   (b) Number of patients offered testing for HIV: _____.
   (c) Number of patients who accepted testing for HIV:_____.

3. Specify which of the following groups are identified as risk groups for this area or hospital (based on annual number of reported TB cases and/or percent with positive TB skin tests from existing community or hospital data):

	Yes	No	%	Comments
__ Foreign Born	___	___	___	_____
__ Homeless	___	___	___	_____
__ Prisoners	___	___	___	_____
__ Nursing Home				

Admissions ___ ___ ___ _____

__ High-risk Minorities ___ ___ ___ _____

__ HIV Infected __ ___ ___ _____

__ Migrant Workers ___ ___ ___ _____

__ IV Drug Users __ ___ ___ _____

__ Elderly (>65) ___ ___ ___ _____

__ Other _____ __ ___ ___ ___ _____

4. Laboratory services are available. Location or name: _____

Indicator: Mycobacteriology laboratory services for species identification and drug susceptibility testing are available.

Met: Yes_____ No_____Partial _____

Comments:_____

_____

I I I. IMPROVING CASE PREVENTION (TUBERCULOSIS PREVENTION)

1. Contacts:

(a) How many close contacts of reported sputum positive cases have been identified:_ _____ . average per case:_____

(b) How many were examined:

≤ age 15 _____ No. of positives _____ No. of negatives_____

> age 15 _____ No. of positives _____ No. of negatives _____

(c) How many positive close contacts were placed on preventive therapy:____
Objective = 95%

≤ age 15_____ No. of completed treatments:_____

> age 15 _____ No. of completed treatments: _____

(d) How many close contacts were identified within 21 days of report of active case:_____ .

(e) How many close contacts were examined within 10 days of identification:_____ .

(f) Was there a TB outbreak during the year: No_____ Yes_____

If yes, list each outbreak separately with contact data:

_____

_____

_____

2. Screening and Preventive Treatment Programs:

Tuberculin testing and preventive therapy programs are conducted by providers and facilities serving clients at high risk for TB:

Methods used for testing: _____

(a) Clients at high risk for TB:

Provider/Facility	Yes	No	Partial	Methods Used for Testing	Comments
Drug Treatment Centers	____	____	____	_____	_____
Correctional Facilities	____	____	____	_____	_____
Migrant Health Centers	____	____	____	_____	_____
Nursing Homes	____	____	____	_____	_____
HIV Testing Sites	____	____	____	_____	_____
HIV Treatment / Monitoring Sites	____	____	____	_____	_____
STD Clinics	____	____	____	_____	_____
Community Health					

Centers	____	____	____	_____	_____
Industrial Medical Clinics	____	____	____	_____	_____
University or College Student Health Services	____	____	____	_____	_____
Private Practice, Managed Care of Group Practice Clinics	____	____	____	_____	_____
Other _____	____	____	____	_____	_____

(b) Employee Group/Staff:

Provider/Facility	Yes	No	Partial	Methods Used for Testing	Comments
High-risk Staff	____	____	____	_____	_____
TB Clinic	____	____	____	_____	_____
Mycobacteriology Labs	____	____	____	_____	_____
Homeless Shelters	____	____	____	_____	_____
Nursing Homes	____	____	____	_____	_____
Drug Treatment Centers	____	____	____	_____	_____
Correctional Facilities	____	____	____	_____	_____
Mental Institutions	____	____	____	_____	_____
Home Health Care Staff	____	____	____	_____	_____
Community Health Centers	____	____	____	_____	_____
Migrant Health Centers	____	____	____	_____	_____
HIV Treatment / Monitoring Sites	____	____	____	_____	_____

Hospitals	____	____	____	_____	_____
Medical Schools	____	____	____	_____	_____
University or College Student Health Services	____	____	____	_____	_____
Other _____	____	____	____	_____	_____

(c) 1. Number of high-risk employees or health care workers in the local health department or hospital placed on preventive therapy:_____.
2. Number that completed preventive therapy within one year:_____.

I V. IMPROVING DISEASE CONTAINMENT (TUBERCULOSIS TREATMENT)

1. Percent of pulmonary TB cases converting from sputum positive to sputum negative in three months: _____ in six months:_____.
Actual (for cases reported to) Unknown _____

   Met: Yes_____No _____

2. Are sputum induction services available?

   Met: Yes_____No _____

3. Percent of pulmonary TB cases without cough that are sputum induced (as a follow-up to adequacy of treatment): _____%.

   Met: Yes _____No _____

4. Percent of therapy patients who receive monitoring liver function tests:_____.

   Cases of disease_____ age 35 or over_____

   Cases of infection_____ age 35 or over_____

5. ***Therapy completion (for disease):***

   (a) Percent of TB cases completing therapy within six months
   Objective = 95% Actual_____(for cases _____reported to___)

Met: Yes_____No ___ _____

Reasons (specifically by each patient) for not completing therapy within 6 months: _____
_____

(b) Percent of TB cases completing drug therapy within 12 months
Objective = 95% Actual_____(for cases _____reported to___)

Met: Yes_____No ___ _____

Reasons (specifically by each patient) for not completing therapy within12 months: _____
_____
_____

For hospitals only:

(a) Number of patients discharged with diagnosis of TB or suspected TB disease:_____ .
(b) Number of patients admitted with diagnosis of TB or suspected TB disease: _____.
(c) Average duration of TB treatment while hospitalized: _____
(d) Number of patients who died in hospital: _____.
(e) Did hospital staff develop a discharge follow-up plan for all TB diagnosed and TB suspect cases in cooperation with the local TB control unit:

Met: Yes_____No ___ _____

Comments:_____

_____

6. Percent of patients receiving recommended ATS/CDC treatment regimen for uncomplicated TB: _____% (for cases reported _____from to___).

Percent of patients receiving other than recommended regimen ____%

Comments: _____

_____

_____

7. Percent of patients on initial four drug therapy: _____.

   Comments:_____

   _____

8. Percent of patients on directly observed therapy (DOT):

   Actual _____% (for cases reported_____ to_____)

   Met: Yes _____No _____

   Comments:_____

   _____

9. What number and percent of TB cases were drug resistant: ___No. ___%

   Single drug: _____No. _____%

   Two or more drugs: _____No. _____%

   Comments:_____

   _____

10. Coordinating TB case follow-up:
    Name of the one person (and position) and their alternate (and position) who has the responsibility in the agency or institution for coordinating TB patient treatment, completion and follow-up:

    Name_____Position _____

    Alternate Name _____Position _____

11. Patient incentives and enablers are available and used to help ensure completion of TB treatment.

    Met: Yes _____No _____

Number of patients using incentives:_____.

Examples of incentives used:_____

Comments:_____

_____

12. Please attach copy of patient education protocol and list of patient education materials.

    Comments: _____

    _____

    _____

V. PROGRAM MONITORING, EVALUATION AND ASSESSMENT

1. TB program management reports (case register, contact, bacteriologic conversion of sputum, drug therapy and completion of preventive therapy) are prepared and reviewed by the local TB control agency or institution to determine if program objectives are being met.

   Objective = Reports are prepared and reviewed at least quarterly or semiannually.

   Met: Yes _____No_____Partial _____

   Does the local TB control unit have a TB case register?

   Met: Yes _____No _____

   Have a TB register procedure manual?

   Met: Yes _____No _____

   How often is the TB register updated?

monthly_____ weekly_____daily _____

Comments:_____

_____

2. Preventable case/death analyses are performed.

	Yes	No	Partial	Comments
(a) For all TB cases	____	____	____	_____
(b) For all TB deaths	____	____	____	_____

Comments:_____

_____

V I. FINANCIAL RESOURCES

Local and state governments must ensure that appropriate medical services are available to all regardless of ability to pay and that health departments are able to carry out their mandated public health responsibilities.

1. Diagnostic, preventive and curative services for TB are available without charge to persons not covered under voluntary health insurance or public assistance programs.

   Indicator: Patients without insurance or public assistance receive services at no cost.

   Met: Yes _____ No _____

   Comments:_____

   _____

   Sources of funds (annual):

   Federal $_____ State $_____ Local Government $_____

2. The TB control program receives adequate financial support.

   Met: Yes _____No Partial_____

Adequate staff, equipment, supplies and facilities (resources) are available for the following program services:

(a) Indicator: to carry out public health program management and analysis.

Met: Yes _____No _____Partial _____

Comments:_____

_____

(b) Indicator: to provide medical direction and consultation.

Met: Yes _____No _____Partial _____
Comments:_____

_____

(c) Indicator: to provide out-patient treatment services, including directly observed therapy (DOT).

Met: Yes _____No _____Partial _____

Comments:_____

_____

(d) Indicator: to provide preventive therapy services, including directly observed preventive therapy (DOPT).

Met: Yes _____No _____Partial _____

Comments:_____

(e) Indicator: to conduct appropriate case finding, contact investigation and surveillance activities.

Met: Yes _____No _____Partial _____

Comments:_____

_____

(f) Indicator: for the collection and analysis of sputum.

Met: Yes _____No _____Partial _____

Comments:_____

_____

(g) Indicator: to perform adequate TB register and other record keeping functions.

Met: Yes No Partial _____

Comments:_____

_____

(h) Indicator: to provide training and education services in accordance with community needs, i.e., to health department and other providers serving clients either with or at high risk for TB.

Met: Yes _____No _____Partial _____

Comments:_____

_____

(i) Indicator: to provide availability of culturally sensitive staff with appropriate foreign language skills to facilitate patient communication.

Met: Yes _____No _____Partial _____

Comments:_____

_____

(j) Indicator: to educate overall community and specific high risk groups regarding the TB problem and the need for screening and prevention.

Met: Yes _____No _____Partial _____

Comments:_____

_____

(k) Indicator: to provide necessary technical, clerical and secretarial support services.

Met: Yes _____No _____Partial_____

Comments:_____

APPENDIX

EPIDEMIOLOGY OF TUBERCULOSIS

Tuberculosis is a communicable disease caused by bacteria (*Mycobacterium tuberculosis* complex) that are usually spread from person to person through the air. When people with tuberculosis of the respiratory tract cough, airborne infectious particles may be produced. If these bacteria are inhaled by other people, they cause an infection that spreads throughout the body. Most individuals who become infected do not develop a clinical illness because the body's immune system brings the infection under control; however, infected people do develop a positive reaction to a tuberculin skin test. The infection can persist for years, perhaps for life,

and infected persons remain at risk of developing disease at any time, especially if the immune system becomes impaired. Although the disease usually affects the lung, it can occur at virtually any site in the body.

Despite the great strides that have been made in the control of tuberculosis, the disease continues to be a public health problem in the United States.

Ongoing analyses of tuberculosis morbidity data continue to identify the magnitude and extent of the problem. These data have important implications for the control and elimination of tuberculosis in the United States.

From 1953 through 1984, the number of tuberculosis cases reported decreased an average of 5% annually. Since 1984, however, the long-term decline has stopped. In 1985 the number of tuberculosis cases remained stable with a decline of only 0.2%. In 1986, there was a 2.6 % increase; in 1987, there was a decline of 1.1%; in 1988, the decline was 0.4%; and in 1989 there was a 4.7% increase. Using the trend for 1981-1984 (average annual decline of 1,706 cases or 6.7%) to calculate expected cases, CDC estimates that from 1985 through 1989 over 22,000 excess cases have accumulated. The recent change in the tuberculosis morbidity trend is probably attributable, in large part, to tuberculosis occurring in persons infected with human immunodeficiency virus (HIV). HIV infection appears to have increased the incidence of tuberculosis by causing immunosuppression, which allows latent tuberculosis infection to progress to clinically apparent disease. Therefore, tuberculosis screening and prevention efforts must be targeted to persons with, or at risk for, HIV infection.

Over two-thirds of cases now occur among Blacks, Hispanics, Asians, and Native Americans. Although specific data are not available, the higher risk in these minority populations may be related primarily to socioeconomic conditions, such as poor housing and nutrition. Thus, prevention and control strategies should be formulated in consultation with, and targeted toward, these high-risk minority populations.

Tuberculosis is also common among immigrants, refugees, and migrant workers from countries where the disease is prevalent. In these patients, organisms responsible for disease are often resistant to commonly used antituberculosis drugs, especially isoniazid (INH). If not recognized and managed appropriately, drug-resistant disease and infection may lead to failure of treatment or preventive measures. In 1989, forty-three percent of the cases among immigrant Asians occurred within the first two years of arrival in the United States. Specific control efforts should thus be directed at recent immigrants before or shortly after their arrival. From 1985 to 1989, nearly two-thirds of cases in foreign born persons occur in those who are less than 35 years old at the time of arrival in the United States. These cases were potentially preventable.

More than 82% of childhood cases in 1989 occurred in minority groups. Childhood cases are geographically focal. Eleven percent of U.S. counties reported one or more

tuberculosis cases among children in 1989. Using childhood cases as sentinel health events, health departments can target certain populations for preventive intervention.

Among all racial and ethnic groups and both sexes, tuberculosis case rates are highest among the elderly. Although case rates are higher among the 5% of the elderly living in nursing homes, the majority of cases occur among 95% of the elderly who live in the community.

Good epidemiologic surveillance data are essential for an effective tuberculosis elimination effort. These data target the populations and geographic areas experiencing the problem and provide clues as to how to deal with it. Additional data are needed to define the extent to which correctional institution populations, homeless people, lower socioeconomic groups, and others are at increased risk. While analyses for national data are useful, analyses of state and local data will be even more important for targeting elimination efforts.

ASSESSMENT TOOL FOR TUBERCULOSIS
ELIMINATION PROGRAMMING
(Missouri Modification, 1998)

This assessment covers the period from January 1, to December 31,

I. **OVERALL PLANNING AND POLICY**

1. State or local community TB elimination advisory committee established?

   Met: Yes_____ No_____ .

For hospital - Does the infection control committee address TB elimination?

Met: Yes_____ No_____.

Comments (Describe how the infection control committee addresses TB elimination): _____

_____

2. Is the local health department aware of Missouri plan for the elimination of TB?

Met: Yes _____No ____ _____

For hospital - Is hospital infection control committee aware of Missouri TB elimination plan?

Met: Yes_____No__ _____

Does the state or local TB control unit or hospital infection control committee have a policy and procedures manual on TB specifics?

Met: Yes _____No _____ ____

General comments by local TB control unit or hospital infection committee on the status or progress toward TB elimination:_____

_____

3. Current ATS and CDC statements and recommendations (including the core curriculum) (a) are available and accessible to all health care providers and (b) have been given to providers serving clients at high risk for TB.

   (a) Indicator: Health care providers can obtain such statements from American Lung Associations.
   Met: Yes _____ No _____Partial_____

   (b) Indicator: For each statement, the appropriate providers in the community serving clients at high risk for TB have been identified and provided a copy of the statements/recommendations/core curriculum.

   Met: Yes____No _____Partial_____

Comments:_____

_____

4. The medical profession, especially those serving clients at high risk for TB, is updated on the status of TB in the state, community or hospitals in a systematic fashion.

   Indicator: Evidence that appropriate target groups (e.g. members of local thoracic society and physicians who report cases, and the medical staffs of drug treatment centers, correctional facilities, migrant health centers, nursing homes, community health centers, HIV clinics and homeless shelter clinics) have been identified and are being reached at least annually via newsletters, announcements, articles, meetings, etc.

   Met: Yes _____ No_____Partial _____

   Comments: _____

   _____

5. Health care providers have access to and are aware of available health department services including: laboratory, treatment, free drugs, contact investigation, medical consultation, training and directly observed therapy services?

   (a) Indicator: Evidence that all these resources have been utilized without regard to ability to pay by patients when not under clinical health department supervision.

   Met: Yes _____No _____Partial _____

   (b) Indicator: Evidence that medical care providers are aware of and using the services, specifically - What is the evidence?

   Met: Yes _____No _____Partial _____
   Comments:_____

   _____

6. Number of TB cases reported by private physicians and hospitals including the Veterans' Administration Hospital and managed care facilities:___.

7. Number of TB cases managed by the local TB control unit: _____; by other than the local TB control unit:_____ .

II IMPROVING SURVEILLANCE (FINDING CASES AND INFECTED PERSONS)

1. What is the percentage of newly reported cases reported within 2 weeks from time of diagnosis or suspected diagnosis or positive laboratory result obtained.

   Objective = 85% Actual _____(for cases reported_____to____)
   Met: Yes _____ No _____.

2. (a) What is the percentage of patients who were co-infected (TB/HIV)
   (b) Number of patients offered testing for HIV: _____.
   (c) Number of patients who accepted testing for HIV:_____.

3. Specify which of the following groups are identified as risk groups for this area or hospital (based on annual number of reported TB cases and/or percent with positive TB skin tests from existing community or hospital data):

	Yes	No	%	Comments
__ Foreign Born	___	___	___	_____
__ Homeless	___	___	___	_____
__ Prisoners	___	___	___	_____
__ Nursing Home Admissions	___	___	___	_____
__ High-risk Minorities	___	___	___	_____
__ HIV Infected	__	___	___	_____
__ Migrant Workers	___	___	___	_____
__ IV Drug Users	__	___		_____
__ Elderly (>65)	___	___	___	_____
__ Other _____	___	___	___	_____

4. Laboratory services are available. Location or name: _____

Indicator: Mycobacteriology laboratory services for species identification and drug susceptibility testing are available.

Met: Yes_____ No_____Partial _____

Comments:_____

_____

I I I. IMPROVING CASE PREVENTION (TUBERCULOSIS PREVENTION)

1. Contacts:

(a) How many close contacts of reported sputum positive cases have been identified:_ _____ . average per case:_____

.

(b) How many were examined:

< age 15 _____ No. of positives _____ No. of negatives_____

> age 15 _____ No. of positives _____ No. of negatives _____

(c) How many positive close contacts were placed on preventive therapy: ____ Objective = 95%

< age 15_____ No. of completed treatments:_____

> age 15 _____ No. of completed treatments: _____

(d) How many close contacts were identified within 21 days of report of active case:_____ .

(e) How many close contacts were examined within 10 days of identification:_____ .

(f) Was there a TB outbreak during the year: No_____ Yes_____

If yes, list each outbreak separately with contact data:

_____

_____

2. Screening and Preventive Treatment Programs:

   Tuberculin testing and preventive therapy programs are conducted by providers and facilities serving clients at high risk for TB:

   Methods used for testing: _____

(a) Clients at high risk for TB:

Provider/Facility	Yes	No	Partial	Methods Used	Comments (Results reported to local health departments)
Drug Treatment Centers	____	____	____	_____	_____
Correctional Facilities	____	____	____	_____	_____
Migrant Health Centers	____	____	____	_____	_____
Nursing Homes	____	____	____	_____	_____
HIV Testing Sites	____	____	____	_____	_____
HIV Treatment / Monitoring Sites	____	____	____	_____	_____
STD Clinics	____	____	____	_____	_____
Community Health Centers	____	____	____	_____	_____
Industrial Medical Clinics	____	____	____	_____	_____
University or College Student Health Services	____	____	____	_____	_____
Private Practice, Managed Care of Group Practice Clinics	____	____	____	_____	_____
Other _____	____	____	____	_____	_____

(b) Employee Group/Staff:

Provider/Facility	Yes	No	Partial	Methods Used for	Comments
High-risk Staff	____	____	____	_____	_____
TB Clinic	____	____	____	_____	_____
Mycobacteriology Labs	____	____	____	_____	_____
Homeless Shelters	____	____	____	_____	_____
Nursing Homes	____	____	____	_____	_____
Drug Treatment Centers	____	____	____	_____	_____
Correctional Facilities	____	____	____	_____	_____
Mental Institutions	____	____	____	_____	_____
Home Health Care Staff	____	____	____	_____	_____
Community Health Centers	____	____	____	_____	_____
Migrant Health Centers	____	____	____	_____	_____
HIV Treatment / Monitoring Sites	____	____	____	_____	_____
Hospitals	____	____	____	_____	_____
Medical Schools	____	____	____	_____	_____
University or College Student Health Services	____	____	____	_____	_____
Other _____	____	____	____	_____	_____

(c) 1. Number of high-risk employees or health care workers in the local health department or hospital placed on preventive therapy:_____.
2. Number that completed preventive therapy within one year:_____.

I V. IMPROVING DISEASE CONTAINMENT (TUBERCULOSIS TREATMENT)

1. Percent of pulmonary TB cases converting from sputum positive to sputum negative in three months: _____ in six months:_____.
   Actual (for cases reported to) Unknown _____

   Met: Yes_____No _____

2. Are sputum induction services available?

   Met: Yes_____No _____

3. Percent of pulmonary TB cases without cough that are sputum induced (as a follow-up to adequacy of treatment): _____%.

   Met: Yes _____No _____

4. Percent of therapy patients who receive monitoring liver function tests:_____.

   Cases of disease_____ age 35 or over_____

   Cases of infection_____ age 35 or over_____

5. ***Therapy completion (for disease):***

   (a) Percent of TB cases completing therapy within six months
   Objective = 95% Actual_____(for cases _____reported to)

   Met: Yes_____No _____

   Reasons (specifically by each patient) for not completing therapy within 6 months: _____
   _____

   (b) Percent of TB cases completing drug therapy within 12 months
   Objective = 95% Actual_____(for cases _____reported to)

   Met: Yes_____No _____

   Reasons (specifically by each patient) for not completing therapy within12 months: _____
   _____

_____

For hospitals only:

(a) Number of patients discharged with diagnosis of TB or suspected TB disease:_____ .
(b) Number of patients admitted with diagnosis of TB or suspected TB disease: _____.
(c) Average duration of TB treatment while hospitalized: _____
(d) Number of patients who died in hospital: _____.
(e) Did hospital staff develop a discharge follow-up plan for all TB diagnosed and TB suspect cases in cooperation with the local TB control unit:

Met: Yes_____No ___ _____

Comments:_____

6. Percent of patients receiving recommended ATS/CDC treatment regimen for uncomplicated TB: _____% (for cases reported ___from to_____).

Percent of patients receiving other than recommended regimen %

Comments: _____

7. Percent of patients on initial four drug therapy: _____.

Comments:_____

_____ _____

8. Percent of patients on directly observed therapy (DOT):

Actual _____% (for cases reported_____ to_____)

Met: Yes _____No _____

Comments:_____

_____ _____

9. What number and percent of TB cases were drug resistant: ____No. ___%

Single drug: _____No. _____%

Two or more drugs: _____No. _____%

Comments:_____

10. Coordinating TB case follow-up:
    Name of the one person (and position) and their alternate (and position) who has the responsibility in the agency or institution for coordinating TB patient treatment, completion and follow-up:

    Name_____Position _____

    Alternate Name _____Position _____

11. Patient incentives and enablers are available and used to help ensure completion of TB treatment.

    Met: Yes _____No _____

    Number of patients using incentives:_____.

    Examples of incentives used:_____

    Comments:_____

    _____

12. Please attach copy of patient education protocol and list of patient education materials.

    Comments: _____

    _____

V. PROGRAM MONITORING, EVALUATION AND ASSESSMENT

1. TB program management reports (case register, contact, bacteriologic conversion of sputum, drug therapy and completion of preventive therapy) are prepared and

reviewed by the local TB control agency or institution to determine if program objectives are being met.

Objective = Reports are prepared and reviewed at least quarterly or semiannually.

Met: Yes _____No_____Partial _____

Does the local TB control unit have a TB case register?

Met: Yes _____No _____

Have a TB register procedure manual?

Met: Yes _____No _____

How often is the TB register updated?

monthly_____ weekly_____daily _____

Comments:_____

2. Preventable case/death analyses are performed.

	Yes	No	Partial	Comments
(a) For all TB cases	____	____	____	_____
(b) For all TB deaths	____	____	____	_____

Comments:_____

_____

V I. FINANCIAL RESOURCES

Local and state governments must ensure that appropriate medical services are available to all regardless of ability to pay and that health departments are able to carry out their mandated public health responsibilities.

1. Diagnostic, preventive and curative services for TB are available without charge to persons not covered under voluntary health insurance or public assistance programs.

   Indicator: Patients without insurance or public assistance receive services at no cost.

   Met: Yes _____ No _____

   Comments:_____
   Sources of funds (annual):

   Federal $_____ State $_____ Local Government $_____

2. The TB control program receives adequate financial support.

   Met: Yes _____No Partial_____

   Adequate staff, equipment, supplies and facilities (resources) are available for the following program services:

   (a) Indicator: to carry out public health program management and analysis.

   Met: Yes _____No _____Partial _____

   Comments:_____

   _____

   (b) Indicator: to provide medical direction and consultation.

   Met: Yes _____No _____Partial _____

   Comments:_____

   _____

   (c) Indicator: to provide out-patient treatment services, including directly observed therapy (DOT).

   Met: Yes _____No _____Partial _____

   Comments:_____

(d) Indicator: to provide preventive therapy services, including directly observed preventive therapy (DOPT).

Met: Yes _____No _____Partial _____
Comments:_____

(e) Indicator: to conduct appropriate case finding, contact investigation and surveillance activities.

Met: Yes _____No _____Partial _____

Comments:_____

(f) Indicator: for the collection and analysis of sputum.

Met: Yes _____No _____Partial _____

Comments:_____

(g) Indicator: to perform adequate TB register and other record keeping functions.

Met: Yes No Partial _____

Comments:_____

(h) Indicator: to provide training and education services in accordance with community needs, i.e., to health department and other providers serving clients either with or at high risk for TB.

Met: Yes _____No _____Partial _____
Comments:_____

(i) Indicator: to provide availability of culturally sensitive staff with appropriate foreign language skills to facilitate patient communication.
Met: Yes _____No _____Partial _____

Comments:_____

(j) Indicator: to educate overall community and specific high risk groups regarding the TB problem and the need for screening and prevention.

Met: Yes _____No _____Partial _____

Comments:_____

(k) Indicator: to provide necessary technical, clerical and secretarial support services.

Met: Yes _____No _____Partial_____

Comments:_____

Appendix 3
Tuberculosis Control Outbreak Response Plan

I. PURPOSE:

This plan was developed by the Missouri Department of Health and Senior Services' TB Control Program to insure that the State of Missouri has the ability to provide needed health and medical services during and following an outbreak of tuberculosis (TB). A prompt and coordinated response will reduce the transmission of TB related to an outbreak.

II. SITUATION AND ASSUMPTIONS

A. Situation

1. Essential to the outbreak response plan is the ability to detect an outbreak. Surveillance and prompt reporting needs to be emphasized, particularly in low incidence areas where the index of suspicion may wane. The TB control program is proposing measures to improve surveillance and prompt reporting by emphasizing state reporting statutes.

2. For the purposes of this plan, the definitions of an outbreak within tuberculosis control are as follows:

Outbreak: Two or more TB cases that are epidemiologically linked or one case with evidence of transmission in a congregate setting (congregate setting may or may not include a private residence). Outbreaks may be characterized based on urgency of response.

a. Tsunami outbreak – A tsunami outbreak requires an urgent response in order to prevent further transmission. Under this category is a "Public relations outbreak" which is an outbreak requiring urgent response, the primary goal being preservation of public relations, rather than the likelihood of preventing ongoing transmission.

b. Gusano outbreak – These outbreaks may span months or years and are uncovered by epidemiological survey of aggregate data. Responses to these outbreaks are prioritized through the strategic planning process.

c. Cluster – Two or more cases linked through genetic testing of isolates or sensitivity patterns, with unknown epidemiological link. The outbreak investigation focuses on uncovering epidemiological links and targeted testing. Every cluster is an outbreak, but not every outbreak is a cluster.

B. Assumptions

1. A major outbreak of TB affecting or impacting any population, particularly those at high risk for active TB, could create health and medical problems beyond the regular capabilities of the TB control program, the state TB lab, Missouri's local public health agencies, and the medical system.

2. Outside assistance (beyond state and local resources) is available and will be accessed as needed.

3. Coordination by the Section for Communicable Disease Prevention, Disease Investigation Unit of the activities of all the responding groups is extremely important.

III. CONCEPT OF OPERATIONS

A. General

1. Once an outbreak has been identified by a local public health agency or other entity (e.g. Correctional Medical Services), direct oversight of the outbreak will be assumed by the Section Chief. The unit Chief will assume the role of situation coordinator or appoint one from the section. Usual oversight is provided as follows:

- General oversight – Unit nurse consultant/unit staff.
- Central District – unit nurse consultant.
- Southeast and Eastern districts – SE Districts CHN IV
- Northwest and Southwest Districts
- St. Louis City Health Department – TB nurse case manager at St. Louis City HD.
- Kansas City Health Department – Unit nurse consultant.
- St. Louis County Health Department – TB nurse case manager at St. Louis County HD.
- Springfield/Greene County Health Department – TB nurse case manager at Springfield/Greene County HD.
- Department of Corrections – Infection control nurses at Department of Corrections (DOC) and Correctional Medical Services (CMS).

2. The State TB lab will have the primary responsibility for conducting the laboratory work associated with the outbreak investigation.

3. The Missouri Rehabilitation Center will be destination for active TB cases involved in the outbreak who are court ordered, or require specialized care above and beyond the capabilities of the local medical facility. Other arrangements for impatient care may be made for those TB patients with concurrent mental illness in cooperation with the Department of Mental Health. Inmates with active TB are treated within DOC facilities when possible.

4. TB testing solution and supplies for contact testing may be obtained through the TB control program by the local public health agency.

5. TB medications may be obtained through the state's contract pharmacy by the local public health agency.

6. Individuals involved in the outbreak that need chest x-rays and evaluation by a physician and have no health insurance and no ability to pay, may be managed through the state diagnostic services program.

B. Actions to be Taken by Operating Time Frame

1. Mitigation/contact investigation

a. Active case finding may be needed under certain circumstances. Active case finding may be completed by screening with the Mantoux skin test (although the sensitivity is poor), signs and symptoms review, chest x-ray screening, or sputum

screening. Certain factors may influence the use of sputum screening as opposed to skin testing and CXRs. These factors include:

- Large numbers of previous PPD positives or anergic responses
- Disincentives exist for the contacts to be forthcoming about symptoms of TB.
- Screening with CXRs exceeds the resources available for the response
- Contacts are transient and difficult to track.
- There is an urgent need to identify the case quickly.

b. A standard contact investigation will be employed as needed and under guidelines established by the Centers for Disease Control and Prevention (CDC) and Missouri Department of Health and Senior Services' TB Control Manual, which are:

- Mantoux skin testing.
- CXR for positive PPDs
- Sputum testing, etc.

c. Guidelines and time frames established by the CDC will be followed when intervening on an outbreak of TB (e.g. initiate contact investigation no more than three (3) working days, examine close contacts within seven (7) working days, etc).

2. Preparedness

a. Outbreaks of special note are multi-drug resistant outbreaks, outbreaks among immuncompromised populations, and outbreaks involving a population of children. These outbreaks deserve special mention because of the specialized experience needed to intervene in them, often above and beyond the capabilities of low-prevalence state such as Missouri. CDC may be contacted to provide on site or financial support in the event of an outbreak such as those above.

b. Other factors to consider include the following:

- Quality and availability of supplies (PPD, medications, etc.)
- Isolation bed space at MRC or in DOC.
- Availability of other needs, such as incentive money.
- Coordination of care with Department of Mental Health.

3. Emergency Response

a. Tsunami outbreaks often involve outbreaks where a large number of contacts are children (e.g. school outbreak), or anytime where immediate progression from TB infection to disease is likely. Key steps in responding to a Tsunami outbreak are:

- Establish a communication network.
- Review preparedness and seek assistance as needed.
- Develop a short-term plan to address immediate needs.

b. Gusano outbreaks will be addressed through the strategic planning process and may involve the key steps listed above. However, there is not the same urgency as with Tsunami outbreaks.

c. Note that in all types of outbreaks, following the CDC guidelines for contact investigations and active case finding provide the framework for response.

4. Recovery

a. All patients identified with active TB or TB infection in the outbreak will need a minimum of six months of antibiotic treatment that is specific for TB.

b. Active TB cases will need directly observed therapy for the entire duration of treatment.

c. After Action Reviews (AARs) should be completed for all outbreak responses within six months of the last case. Gusano outbreaks may need periodic AARs during the response, as these outbreaks may persist for several years. AARs may be completed by the Missouri Department of Health and Senior Services' epidemiological team, or the Missouri Advisory Committee for the Elimination of Tuberculosis. AARs should involve all members of the response team. Issues to consider for the AAR may be:

- What was found.
- Effectiveness of interventions
- Lessons learned
- What went wrong.
- What went right (etc.).

IV. ORGANIZATION AND ASSIGNMENT

A. Organization – See Attachment 1

B. Assignment of Responsibility

1. Overall Coordination – through the leadership of the Section for Communicable Disease Prevention, Disease Investigation Unit, a situation coordinator and a team will be developed, which may or may not include staff from the following:

- Section staff
- Local Public Health Agency
- District nurses in SW and SE District
- DHSS staff including:
  - Center for local public health
  - Emergency response
  - District staff
  - Legal
  - Public relations
  - Division director
- TB state lab
- MRC staff
- Contract pharmacy staff
- Attending physician(s)
- Infection control
- Other state departments
- Centers for Disease Control and Prevention, Division of TB Elimination

2. The team will be tasked with assessing the nature of the outbreak, problems will be enumerated, goals set, interventions implemented, and ongoing and final evaluation completed.

3. Key decisions will need to be made from the outset. Also, a communication system will be established and implemented as soon as appropriate. An assessment of resources needed to address the outbreak responsibly will happen early in the process.

V. ADMINISTRATION AND LOGISTICS

A. Administrative

Epidemiological data will be needed to follow the outbreak. This may include:

a) Bacteriology
b) Disease surveillance data

c) Infection data
d) Other databases will be created as needed.

B. Logistic

1. Communications support will be provided by The Section for Communicable Disease Prevention and its Division with the Department with the Department of Health & Senior services.

2. Other supply requisitions will be made through normal channels as much as possible.

Appendix 4

Missouri Statutes and Regulations
Concerning Tuberculosis

Missouri Statutes Concerning Tuberculosis

Click on the link after the title of the statute to access the complete text from the *Revised Statues of the State of Missouri* on the Missouri General Assembly's internet site.

Prevention of Contagious Diseases
Third Class Cities *(RSMo* 77.530*)*
http://www.moga.state.mo.us/statutes/c000-099/0770530.htm
Fourth Class Cities (*RSMo* 79.380)
http://www.moga.state.mo.us/statutes/c000-099/0790380.htm
Towns and Villages (*RSMo* 80.090)
http://www.moga.state.mo.us/statutes/c000-099/0800090.htm

Contagious Diseases Excluded from School (*RSMo* 167.191)
http://www.moga.state.mo.us/statutes/c100-199/1670191.htm

Release of Medical Records (*RSMo* 191.227)
http://www.moga.state.mo.us/statutes/c100-199/1910227.htm

Duties of Department of Health (*RSMo* 192.020)
http://www.moga.state.mo.us/statutes/c100-199/1920020.htm

Confidentiality of Medical Records (*RSMo* 192.067)
http://www.moga.state.mo.us/statutes/c100-199/1920067.htm

Contagious or Infectious Disease Reports

Contagious or infectious disease reports by medical treatment facilities (*RSMo* 192.138)
http://www.moga.state.mo.us/statutes/c100-199/1920138.htm
Communicable disease reporting (*RSMo* 192.139)
http://www.moga.state.mo.us/statutes/c100-199/1920139.htm

Request for Public Health Nurse or Disinfection of Public or Private Places (*RSMo* 192.140)
http://www.moga.state.mo.us/statutes/c100-199/1920140.htm

Duties of County Health Officer (*RSMo* 192.280)
http://www.moga.state.mo.us/statutes/c100-199/1920280.htm

State Regulations Supersede Local Rules (*RSMo* 192.290)
http://www.moga.state.mo.us/statutes/c100-199/1920290.htm

Counties May Make Additional Health Rules (*RSMo* 192.300)
http://www.moga.state.mo.us/statutes/c100-199/1920300.htm

Duties of Cities Over 75,000 (*RSMo* 192.310)
http://www.moga.state.mo.us/statutes/c100-199/1920310.htm

Violation of Law or Quarantine (*RSMo* 192.320)
http://www.moga.state.mo.us/statutes/c100-199/1920320.htm

Communicable Diseases Notification to First Responder and Good Samaritan
Definitions (*RSMo* 192.800)
http://www.moga.state.mo.us/statutes/c100-199/1920800.htm
Department of health to notify first responders (*RSMo* 192.802)
http://www.moga.state.mo.us/statutes/c100-199/1920802.htm

Employees with Communicable Diseases (*RSMo* 196.225)
http://www.moga.state.mo.us/statutes/c100-199/1960225.htm

Commitment and Hospitalization of Tuberculosis Patients
Definitions (*RSMo* 199.170)
http://www.moga.state.mo.us/statutes/c100-199/1990170.htm
Local health agency may institute proceedings for commitment *(RSMo* 199.180)
http://www.moga.state.mo.us/statutes/c100-199/1990180.htm
Patients not to be committed when (*RSMo* 199.190)
http://www.moga.state.mo.us/statutes/c100-199/1990190.htm
Procedure in circuit court--duties of local prosecuting officers--costs *(RSMo* 199.200)
http://www.moga.state.mo.us/statutes/c100-199/1990200.htm
Rights of Patient, witnesses--order of course--transportation costs *(RSMo* 199.210)
http://www.moga.state.mo.us/statutes/c100-199/1990210.htm
Order appealable *(RSMo* 199.220)
http://www.moga.state.mo.us/statutes/c100-199/1990220.htm
Confinement on order, duration (*RSMo* 199.230)
http://www.moga.state.mo.us/statutes/c100-199/1990230.htm
Consent required for medical or surgical treatment (*RSMo* 199.240)
http://www.moga.state.mo.us/statutes/c100-199/1990240.htm

Facilities to provided--costs, how paid (*RSMo* 199.250)
http://www.moga.state.mo.us/statutes/c100-199/1990250.htm
Apprehension and return of patient leaving rehabilitation center without discharge (*RSMo* 199.260)
http://www.moga.state.mo.us/statutes/c100-199/1990260.htm
Proceedings for release of patient (*RSMo* 199.270)
http://www.moga.state.mo.us/statutes/c100-199/1990270.htm

Tuberculosis Screening for Residents and Workers in Nursing Homes (*RSMo* 199.350)
http://www.moga.state.mo.us/statutes/c100-199/1990350.htm

Contagious Diseases in Prisoners (*RSMo* 221.130)
http://www.moga.state.mo.us/statutes/c200-299/2210130.htm

Prevention of Occupational Diseases (*RSMo* 292.300)
http://www.moga.state.mo.us/statutes/c200-299/2920300.htm

Imprisonment (*RSMo* 558.011)
http://www.moga.state.mo.us/statutes/c500-599/5580011.htm

Tuberculosis and the Missouri Code of Regulations

The Code of State Regulations, or rules, is available on the Missouri Secretary of State's web site in PDF format. Regulations are organized by title, division, chapter, and section. For example, 19 CSR 20-20.020 refers to Title 19, Division 20, Chapter 20, Section 020. The links that follow take the user to the appropriate division and chapter of the regulations. Scroll to the specific section number.

19 CSR 20-20.010 Definitions Relating to Communicable, Environmental and Occupational Diseases
19 CSR 20-20.020 Communicable, Environmental and Occupational Diseases
19 CSR 20-20.030 Exclusion from School and Readmission
19 CSR 20-20.040 Measure for the control of Communicable, Environmental and Occupational Diseases
19 CSR 20.20.050 Quarantine or Isolation Practices and Closing of Schools and Places of Public and Private Assembly
19 CSR 20.20.070 Duties of Local Health Departments
19 CSR 20-20.080 Duties of Laboratories
19 CSR 20.20.090 Contact with Communicable Diseases by First Responders or Emergency Medical Persons and Mortuary Personnel
19 CSR 20.20.100 Tuberculosis Testing for Residents and Workers in Long-Term Care Facilities and State Correctional Centers
http://mosl.sos.state.mo.us/csr/19csr/19c20-20.pdf

19 CSR 30-40.045 Communicable Disease Policy
19 CSR 30-40.046 Mandatory Notice to Emergency Response Personnel of Possible Exposure to Communicable Diseases

19 CSR 30-40.047 Mandatory Notice to Emergency Response Personnel of Possible Exposure to Communicable Diseases
19 CSR 30-40.048 Training for Emergency Response Personnel and Good Samaritans on the Communicable Disease Reporting Regulation
http://mosl.sos.state.mo.us/csr/19csr/19c30-40.pdf

Chapter 61--Licensing Rules for Family Day Care Homes

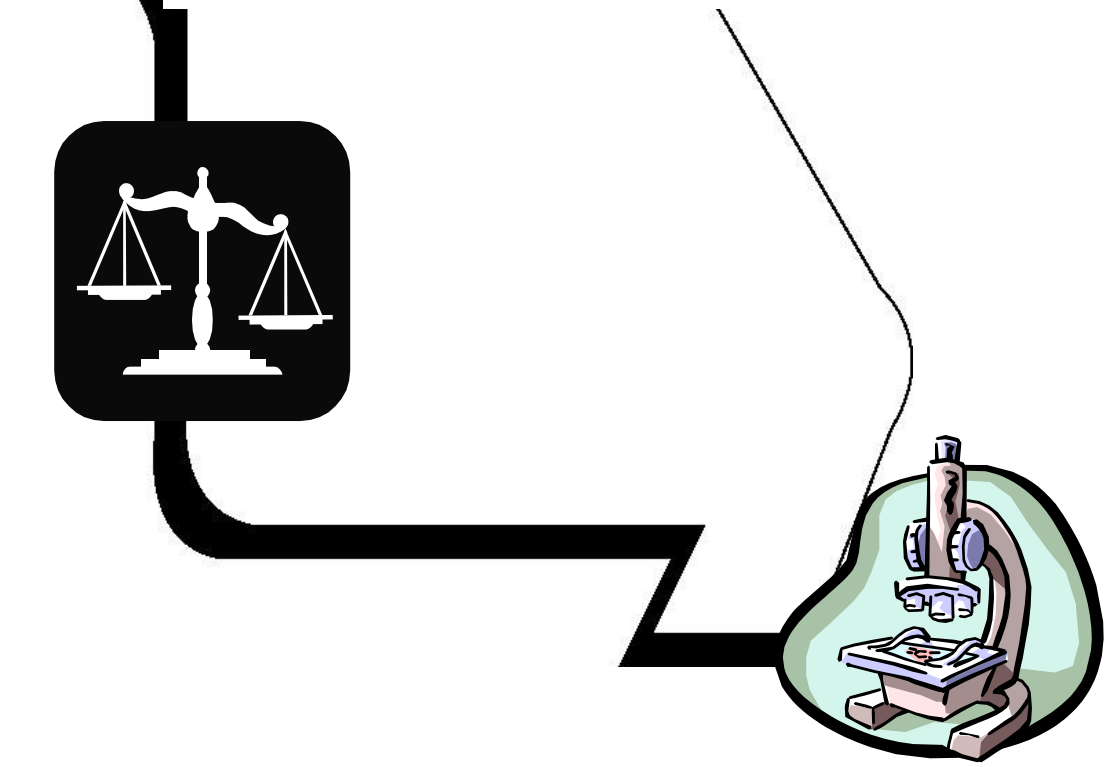
19 CSR 30-61.010 Definitions
19 CSR 30-61.125 Medical Examination Reports
19 CSR 30-61.185 Health Care
http://mosl.sos.state.mo.us/csr/19csr/19c30-61.pdf

Chapter 62--Licensing Rules for Group Day Care Homes and Child Day Care Centers

19 CSR 30-62.010 Definitions
19 CSR 30-62.122 Medical Examination Reports
19 CSR 30-62.192 Health Care
http://mosl.sos.state.mo.us/csr/19csr/19c30-62.pdf

MISSOURI HANDBOOK FOR OFFICERS OF THE COURT

Court Commitment of Tuberculosis Patients



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Contents

Introduction

Missouri statutes have been developed to meet the need for more comprehensive and specific TB control measure to:

- Help ensure that potentially infectious TB cases are made noninfectious as quickly as possible
- Help ensure that TB cases complete a prescribed regimen
- Prevent the emergence and spread of multidrug-resistant TB (MDR-TB).

When infectious TB patients are not complying with treatment regimens or following other protocols to ensure that they do not infect others, public health agencies must consider committing them to a facility that provides treatment. Committing an infectious TB patient to a treatment facility requires collaboration between courts and public health agencies to minimize the spread of TB. This collaboration assures TB cases are made non-infectious as quickly as possible.

This manual shows how the courts can assure the public's health by restricting movements of infectious persons. It contains sample of documents that can be used during the commitment process, a fact sheet on tuberculosis for officers of the court and transporters of TB patients, definitions, as well as Missouri statues and regulations that pertain to TB.

Sample forms and guidelines that can be used in the commitment process are provided in the handbook. The following outline describes the process and when to use the forms.

I. TB patient is identified.

The **patient responsibility form** (p. 0) is completed. The local public health agency (LPHA) initiates this form when the patient is identified. At this time, the nurse informs the patient of their responsibility to adhere to the treatment plan. The nurse also informs the patient that they could be involuntarily committed to Missouri Rehabilitation Center for treatment if they do not follow the plan.

II. TB patient is not complying with treatment plan.

If the patient does not comply with the treatment plan (not taking medications, not making appointments for directly observed therapy [DOT], not appearing for doctor's follow-up appointments, etc.) or if they are infectious and refuse to stay at home or wear a mask, the nurse informs the director of the LPHA who prepares and sends a **warning letter** (p. 4) to the patient.

III. TB patient still is not complying with the treatment plan.

If the patient is still not complying with the treatment plan after about two weeks, or if an infectious patient is not complying with orders to stay at home and wear a mask when appropriate, the LPHA prepares an **affidavit** (p. 5). The nurse collects all the available documentation of noncompliance. The **evidentiary tuberculosis information sheet for attorneys** (p. 8) lists difference types of appropriate evidence. The LPHA also notifies Department of Health and Senior Services (DHSS), which prepares the **certification** (p. 7) for the nurse. The **certification** states that the records that are transferred from DHSS are bona fide records. The nurse then contacts the prosecuting attorney and sends all of the documentation.

IV. The prosecuting attorney at this point will prepare the **petition** (p. 11) to the court and present it to the court for a hearing date.

V. The **petition** is also used for 96-hour emergency commitment. Emergency commitment is utilized when there is a very contagious noncompliant individual while the normal court date for commitment is being scheduled.

I, _____(patient's name), understand I have been diagnosed with tuberculosis and that I have the following responsibilities in regards to my condition and treatment.

- That while infectious I must remain at home (including not working or attending school) so I will not spread TB bacteria to other people.
- If I must leave my home or I have guest into my home I must wear the protective mask provided to me.
- That I will be placed on several different medications for the next several months and that this medication must be taken exactly as the doctor or nurse has instructed me to take it.
- That while on these medications I will be participating in Directly Observed Therapy (DOT) and must be available to the health care worker at the time and place we agreed upon to receive my medications.
- That while taking these medications I will report any serious side effects to my doctor or nurse. These side effects include:

No Appetite	Tingling or Numbness Around the Mouth
Nausea	Easy Bruising
Vomiting	Blurred Vision
Yellowish Skin or Eyes	Ringing in the Ears
Fever for 3 or More Days	Hearing Loss
Abdominal Pain	Dizziness
Tingling fingers or toes	Aching Joints
Skin Rash	Easy Bleeding

- That I must keep all scheduled appointments.

I understand that my failure to comply with these responsibilities could result in prolonging my illness and pose a health risk to others as long as I remain infectious.
By my signature below I certify that my responsibilities in regards to my treatment for tuberculosis and the consequences of not meeting my responsibilities have been explained to me and that I understand these responsibilities. I further certify that my failure to meet these responsibilities could result in my involuntary hospitalization pursuant to § 199.180 of the Missouri Revised Statues.

_____ _____
(Signature of Patient) (Date Signed)

_____ _____
(Witnessed By) (Date Signed)

I was present when the above was read to _____

_____ _____
(Witnessed By) (Date Signed)
(Date)

Name_____
Street _____ City, MO Zip_____

Dear Mr/Mrs/Ms. _____:

I have been informed by _____(health care worker), in accordance with Section 192.067 of the Missouri Revised Statutes and 19 CSR 20-20.020, that you have been diagnosed as having tuberculosis disease as confirmed by _____. You were placed on notice on ___/___/___(date) that you have been diagnosed with tuberculosis disease and were given notice of your responsibilities and obligations as a result, including the need to follow your prescribed treatment plan. You acknowledged on ___/___/___(date), by signing the "Tuberculosis Patient Responsibilities Notification", that you understood your responsibilities and the importance of your compliance with these responsibilities and obligations.

You have indicated to _____/ our records indicate that you are now unable/ unwilling to adhere to your prescribed treatment plan. As a result, you pose a risk to the public health of others. Continued failure/ refusal to comply with the prescribed course of treatment will result in you remaining in a continued infectious state, thereby exposing other persons to danger of infection.

This letter is to place you on notice that you must complete treatment as prescribed by your physician. If you continue to fail to comply with the prescribed treatment, then pursuant to Section 199.180 of the Missouri Revised Statutes, the Board of Public Health may file a Petition with the Circuit Court, seeking to have you committed to a specified facility, where you will remain confined for the period of your treatment.

This agency will continue to work with you and your physician to provide such assistance as is reasonably appropriate to facilitate the completion of your prescribed treatment plan. If you have any questions, please call (____)___-____.

Dated at _____, Missouri on _____.

LPHA Director's Signature
Title
Town, Missouri

STATE OF MISSOURI)
) ss.
County of _____)

AFFIDAVIT

I, Florence Nightingale, of lawful age and being first duly sworn do hereby state the facts contained in the Affidavit are true to my best knowledge, information and belief.

That I am presently licensed as a (List license R.N., M.D. etc.) in the State of _____. As a part of my education, training and experience in the health care field, I have worked closely with patients who were treated for active tuberculosis. Additionally, I have _____ years experience in the area of treatment of persons with tuberculosis. I am currently employed at (list treatment facility/or department), located in (list city and county).

Amy Jones is a patient at the (list facility where the patient is being treated). Further during treatment and testing of Amy Jones, she was diagnosed as having active tuberculosis. The basis of the diagnosis of active tuberculosis was:

(Here list the relevant diagnosis information) Example:

1. An abnormal x-ray.
2. A positive smear report indicating acid-fast bacilli (AFB). Attached Exhibit
3. A culture report of the sputum of Amy Jones showing AFB was present. Attached as Exhibit 2.

During the treatment of Amy Jones, Ms Jones was advised of the responsibilities of a tuberculosis patient as evidenced by the Patient Responsibilities Notification form signed by Amy Jones on (list date), a copy of which is attached to this affidavit and incorporated herein by reference. Attached as Exhibit 3.

Further, Amy Jones has refused to follow the treatment plans as outlined for her by her treating physicians. By failing to follow the treatment plans, Amy Jones is creating a health risk to herself and the general population at large. Moreover, if Amy Jones is not ordered to follow a prescribed treatment plan (list here results of her failure to follow the plan and any other relevant information you may have to show why the court should issue it's order).

_____
Florence Nightingale

On this_____ Day of _____in the year 200__ before me, Ima Friend (name of notary), a Notary Public in and for said state, personally appeared Florence Nightingale (name of individual), known to me to be the person who executed the within Affidavit, and acknowledged to me that she executed the same for the purposes therein stated.

_____
Ima Friend, Notary Public

(Notary Seal or Stamp)

CERTIFICATION

STATE OF MISSOURI)
)ss
COUNTY OF COLE)

CERTIFICATION

Before me, the undersigned authority, personally appeared Mary Menges, Administrator for the Section for Communicable Disease Prevention, Missouri Department of Health and Senior Services, who, being by me duly sworn and deposed, states as follows:

My name is Mary Menges. I am of sound mind, capable of making this certification, and personally acquainted with the facts herein stated:

I am the custodian of records for the Section for Communicable Disease Prevention, Missouri Department of Health and Senior Services. Attached hereto are records consisting of _____ pages which comprise reports relating to sputum examinations for _____. These records are kept by the Section for Communicable Disease Prevention, Missouri Department of Health and Senior Services in the regular course of business, and it was the regular course of business of the Section for Communicable Disease Prevention, Missouri Department of Health and Senior Services' representatives, with knowledge of the act or event recorded to make the record or to transmit information thereof to be included in such record; and the record was made at or near the time of the act or event. The records attached hereto are exact duplicates of the originals.

_____
Mary T. Menges, Administrator
Section for Communicable Disease Prevention
Missouri Department of Health and Senior Services

In witness whereof I have hereunto subscribed my name and affixed my official seal this ___ day of _____, 2002.

_____
Notary Public

My commission expires:

EVIDENTIARY TUBERCULOSIS INFORMATION SHEET FOR ATTORNEYS

EVIDENCE OF CONTAGIOUSNESS

Smear report

- The results from the smear will be available in about 24 hours after it reaches the laboratory.
- This is derived from a sample of sputum collected from the patient. This indicates that AFB (acid-fast bacilli) is present).
- There are many different kinds of AFB and Tuberculosis is one.
- TB is the only AFB that is contagious from person to person.
- Positive AFB smear reports will have a +1, +2, +3 or +4 on them. With +4 indicating the highest degree of contagiousness.
- After the patient has been on treatment for a couple of weeks the numbers on the AFB smear reports should begin to decrease until there is no AFB present.

Culture report

- This is the final report on the sputum and may take from 2 to 6 weeks to get the results
- It identifies which AFBs are present
- Tuberculosis culture reports that have tuberculosis identified are said to be positive. Culture reports that do not identify tuberculosis are said to be negative.
- It is the only way to confirm the diagnosis of Tuberculosis
- Cultures reports like the AFB smear reports will have +1, +2, +3, or +4. The person that has a +4 culture report is considered to be the highest degree of contagiousness.
- A person with tuberculosis receiving treatment should have negative culture reports within one to three months after treatment is started.

Sensitivity report

- Medications used to treat patients are tested to see if these particular TB germs can be eliminated with these medicines.
- If the germs can be eliminated using the medicines listed it will say TB germs are sensitive to each medicine.
- If the germs cannot be eliminated by using these medicines the report will say they are resistant to the medicine

X-ray reports

- Most people who have active TB will have abnormal chest x-ray findings.
- Most abnormal findings will be in the upper lobes of the lungs, but not always
- Chest x-ray should improve after patient has been on treatment and taking medication as ordered

Documented skin test conversions among contacts

- Contacts are people who have spent a significant amount of time with the person with TB
- Contacts who have a PPD (TB skin test) reaction that is measured 5mm or greater is said to have a skin test conversion.

- Skin test conversion on contacts indicates that the person with TB is contagious and is infecting others with TB

PE (physical exam)

- If the doctor suspects the person has TB he often will write "suspected TB" and list reasons for this suspected diagnosis. Example: Patient is experiencing night sweats, has lost 30 pounds in two months, low grade fever and has a productive cough for 2 months, and his wife had active Tuberculosis about 5 years ago. He has a positive PPD.

EVIDENCE OF NON-COMPLIANCE OR POTENTIAL FOR NON-COMPLIANCE

Missed clinic appointments

- Indicates that patient is not following up as instructed and there may be a multitude of reasons for this.

Missed medication dosages

- This is real important because TB germs can rapidly become resistant to the medicines treating TB if they are not adhered to exactly as prescribed.

Psychosocial Concerns:

- Homelessness- if the person has no home they may wander from place to place increasing the number of people they infect. The nurse may not be able to locate the patient to give the medicine, thus increasing chances of missed doses and prolonging time of contagiousness.
- Alcoholism – When alcohol is consumed while taking TB medicines it increases the chances of liver damage. When liver dysfunction occurs it makes treating TB extremely difficult.
- If a person is drunk it also increases the chances of not taking the medicine as prescribed.
- If a person is drunk it also increases the risk that isolation from other people will not be maintained and the person will not use precautions such as covering their mouth when coughing, etc.

EVIDENCE OF PROBLEMS MAINTAINING ISOLATION

- Homelessness – the person will not have a place to stay away from other people. Also, the person may not be able to stay warm or cool or dry thus increasing the possibility of developing other illnesses.

Young Children in Home

- Young children who become infected with TB germs have a much higher risk of rapidly developing TB disease and often develop TB meningitis.

EVIDENCE OF EDUCATION PROVIDED TO PATIENT

- Medication information including dosages
- Information on isolation contagiousness
- Potential for drug resistance
- This information should be found in the nursing notes in the patient's county health department record. This shows that the patient has been informed of what should be done and what can happen if this information isn't followed.

PETITION

IN THE CIRCUIT COURT OF _____, COUNTY
STATE OF MISSOURI

_____COUNTY)
PUBLIC HEALTH DEPARTMENT,)

Petitioner) Case No. _____

v.)

_____)

Respondent.)

PETITION FOR COMMITMENT

Petitioner the _____County Public Health Department, by and through its attorney _____, states and alleges as follows:

1. Respondent __(individual)___ , a _____ male/female, age ____, is a person with active tuberculosis, as demonstrated by the following clinical, bacteriological or radiological evidence:_____.(or is a person who is a potential transmitter of tuberculosis, in that he/she has the diagnosis of pulmonary tuberculosis as of __(date/ place of diagnosis)__, but has not begun a recommended course of therapy, or having begun a recommended course of therapy, has not completed the therapy.)

2. Respondent is conducting himself/herself in such a manner as to expose other persons to danger of infection, in that respondent is violating the rules, regulations, instructions or orders promulgated by the Department of Health and Senior Services or this Board of Public Health by: __(set forth ways in which respondent is violating rules, etc.)_____.

3. Respondent has been previously directed by this Board of Public Health to comply with such rules, regulations, instructions or orders, but respondent has refused and continues to refuse to so comply.

4. (Set forth any other relevant facts or special circumstances here.)

5. Respondent resides at _____, in _____County, Missouri. (or Respondent is a nonresident or has no fixed place of abode, but may be found at _____ in _____County.)

6. Section 199.180 of the Revised Missouri Statutes provides that when a person with active tuberculosis (or a person who is a potential transmitter) violates the rules, regulations, instructions, or orders promulgated by the department of health and senior services or the local board, and is thereby conducting himself or herself so as to expose other persons to danger of infection, after having been directed by the local board to comply with such rules, regulations, instructions or orders, the local board may institute proceedings by petition for commitment in the circuit court of the county in which such person resides, or if a nonresident or has not fixed place of abode, where such person may be found.

7. Public health requires the commitment of respondent so that he/she is no longer a risk to himself/herself or other members of the public.

8. Due to the public health risk, petitioner also asks this Court to order that respondent be ordered to wear a mask during all times that respondent is being transported by public transportation, such as a taxi, or by police, to the place of commitment.

Wherefore, Petitioner _____Board of Public Health prays this Court for its Order committing respondent _____ to a facility designated by The Curators of the University of Missouri until such time as the director of the facility determines that respondent no longer has active tuberculosis or that respondent's discharge will not endanger public health, in accordance with Section 199.230 of the Missouri Revised Statutes,

further ordering that respondent be required to wear a mask during any times in which respondent is being transported by public vehicle or by the police to the place of commitment, and for such other relief as this Court deems just and proper.

Respectfully submitted,

_____
Attorney for Petitioner
(Address)

Verification of Health Care Provider

State of Missouri)
) ss.
County of _____)

The undersigned, being duly sworn on his/her oath, states that he/she is a health care provider licensed in the State of Missouri; that he/she has reviewed the foregoing Petition for Commitment, and is familiar with the facts of this matter; and that the statements and matters alleged in the Petition for Commitment are true to the best of his/her knowledge and belief.

_____
Name Date

Subscribed and sworn to before me this ____ day of _____, 20__.

_____
Notary Public My commission expires:

DEFINITIONS OF TERMS IN THIS GUIDE

Active Tuberculosis - tuberculosis disease that is demonstrated to be contagious by clinical, bacteriological, or radiological evidence. Tuberculosis is considered active until cured;

Cavity - a hole in the lung resulting from the destruction of pulmonary tissue by TB or other pulmonary infections or conditions. TB patients who have cavities in their lungs are referred to as having cavitary disease, and they are often more infectious than TB patients without cavitary disease.

Culture - the process of growing bacteria in the laboratory so that organisms can be identified.

Cure/treatment to cure - the completion of a recommended course of therapy as defined in subdivision (5) of this section and as determined by the attending physician;

Directly Observed Therapy (DOT), - an adherence-enhancing strategy in which a health care worker or other designated person watches the patient swallows each dose of medication.

TB Infection - a condition in which living tubercle bacilli are present in the body but the disease is not active. Infected persons usually have positive tuberculin reactions, but they have no symptoms related to the infection and are not infectious. However, infected persons remain at lifelong risk of developing disease unless preventive therapy is given.

Local board - any legally constituted local city or county board of health or health center board of trustees or the director of health of the city of Kansas City, the director of the Springfield-Greene County health department, the director of health of St. Louis County or the commissioner of health of the City of St. Louis, or in the absence of such board, the county commission or the county board of tuberculosis hospital commissioners of any county;

N95 - a personal respiratory protection mask that does not allow for tuberculosis bacteria to enter from the atmosphere or exit the patient into the atmosphere.

Potential Transmitter - any person who has the diagnosis of pulmonary tuberculosis but has not begun a recommended course of therapy, or who has the diagnosis of pulmonary tuberculosis and has started a recommended course of therapy but has not completed the therapy. This status applies to any individual with tuberculosis, regardless of his or her current bacteriologic status;

Recommended Course of Therapy - a regimen of antituberculosis chemotherapy in accordance with medical standards of the American Thoracic Society and the Centers for Disease Control and Prevention.

Smear - a laboratory technique for visualizing mycobacteria. The specimen is smeared onto a slide and stained, then examine using a microscope.

Sputum - phlegm coughed up from deep within the lungs.

Missouri Revised Statutes

Chapter 192
Department of Health and Senior Services
Section *192.005*

August 28, 2002

Department of health and senior services created--division of health abolished--duties.

192.005. There is hereby created and established as a department of state government the "Department of Health and Senior Services". The department of health and senior services shall

supervise and manage all public health functions and programs. The department shall be governed by the provisions of the Omnibus State Reorganization Act of 1974, Appendix B, RSMo, unless otherwise provided in sections 192.005 to 192.014. The division of health of the department of social services, chapter 191, RSMo, this chapter, and others, including, but not limited to, such agencies and functions as the state health planning and development agency, the crippled children's service, chapter 201, RSMo, the bureau and the program for the prevention of mental retardation, the hospital subsidy program, chapter 189, RSMo, the state board of health, section 191.400, RSMo, the student loan program, sections 191.500 to 191.550, RSMo, the family practice residency program, sections 191.575 to 191.590, RSMo, the licensure and certification of hospitals, chapter 197, RSMo, the Missouri chest hospital, sections 199.010 to 199.070, RSMo, are hereby transferred to the department of health and senior services by a type I transfer, and the state cancer center and cancer commission, chapter 200, RSMo, is hereby transferred to the department of health and senior services by a type III transfer as such transfers are defined in section 1 of the Omnibus State Reorganization Act of 1974, Appendix B, RSMo Supp. 1984. The provisions of section 1 of the Omnibus State Reorganization Act of 1974, Appendix B, RSMo Supp. 1984, relating to the manner and procedures for transfers of state agencies shall apply to the transfers provided in this section. The division of health of the department of social services is abolished.

(L. 1985 S.B. 25 § 1, A.L. 1993 S.B. 52)

Missouri Revised Statutes

Chapter 192
Department of Health and Senior Services
Section *192.067*

August 28, 2002

Patients' medical records, department may receive information from --purpose--confidentiality--immunity for persons releasing records, exception--penalty--costs, how paid.

192.067. 1. The department of health and senior services, for purposes of conducting epidemiological studies to be used in promoting and safeguarding the health of the citizens of Missouri under the authority of this chapter is authorized to receive information from patient medical records.

2. The department shall maintain the confidentiality of all medical record information abstracted by or reported to the department. Medical information secured pursuant to the provisions of subsection 1 of this section may be released by the department only in a statistical aggregate form that precludes and prevents the identification of patient, physician, or medical facility except that medical information may be shared with other public health authorities and coinvestigators of a health study if they abide by the same confidentiality restrictions required of the department of health and senior services. The department of health and senior services, public health authorities and coinvestigators shall use the information collected only for the purposes provided for in this section.

3. No individual or organization providing information to the department in accordance with this section shall be deemed to be or be held liable, either civilly or criminally, for divulging confidential information unless such individual organization acted in bad faith or with malicious purpose.

4. The department of health and senior services is authorized to reimburse medical care facilities, within the limits of appropriations made for that purpose, for the costs associated with abstracting data for special studies.

5. Any department of health and senior services employee, public health authority or coinvestigator of a study who knowingly releases information which violates the provisions of this section shall be guilty of a class A misdemeanor and, upon conviction, shall be punished as provided by law.

(L. 1988 H.B. 1134 § 3) Effective 5-4-88

Missouri Revised Statutes

Chapter 199
Rehabilitation Center--Head Injury--Tuberculosis Testing
Section *199.170*

August 28, 2002

Definitions.

199.170. The following terms, as used in sections 199.170 to 199.270, mean:

(1) "Active tuberculosis", tuberculosis disease that is demonstrated to be contagious by clinical, bacteriological, or radiological evidence. Tuberculosis is considered active until cured;

(2) "Cure" or "treatment to cure", the completion of a recommended course of therapy as defined in subdivision (5) of this section and as determined by the attending physician;

(3) "Local board", any legally constituted local city or county board of health or health center board of trustees or the director of health of the city of Kansas City, the director of the Springfield-Greene County health department, the director of health of St. Louis County or the commissioner of health of the City of St. Louis, or in the absence of such board, the county commission or the county board of tuberculosis hospital commissioners of any county;

(4) "Potential transmitter", any person who has the diagnosis of pulmonary tuberculosis but has not begun a recommended course of therapy, or who has the diagnosis of pulmonary tuberculosis and has started a recommended course of therapy but has not completed the therapy. This status applies to any individual with tuberculosis, regardless of his or her current bacteriologic status;

(5) "Recommended course of therapy", a regimen of antituberculosis chemotherapy in accordance with medical standards of the American Thoracic Society and the Centers for Disease Control and Prevention.

(L. 1961 p. 518 § 1, A.L. 1986 H.B. 1554 Revision, A.L. 1990 H.B. 1739 merged with S.B. 742, A.L. 1999 H.B. 721 merged with S.B. 261, A.L. 2001 S.B. 266)

Missouri Revised Statutes

Chapter 199
Rehabilitation Center--Head Injury--Tuberculosis Testing
Section *199.180*

August 28, 2002

Local health agency may institute proceedings for commitment --emergency temporary commitment permitted, when.

199.180. 1. A person found to have tuberculosis shall follow the instructions of the local board, shall obtain the required treatment, and shall minimize the risk of infecting others with tuberculosis.

2. When a person with active tuberculosis, or a person who is a potential transmitter, violates the rules, regulations, instructions, or orders promulgated by the department of health and senior services or the local board, and is thereby conducting himself or herself so as to expose other persons to danger of infection, after having been directed by the local board to comply with such rules, regulations, instructions, or orders, the local board may institute proceedings by petition for commitment, returnable to the circuit court of the county in which such person resides, or if the person be a nonresident or has no fixed place of abode, then in the county in which the person is found. Strictness of pleading shall not be required and a general allegation that the public health requires commitment of the person named therein shall be sufficient.

3. If the board determines that a person with active tuberculosis, or a person who is a potential transmitter, poses an immediate threat by conducting himself or herself so as to expose other persons to an immediate danger of infection, the board may file an ex parte petition for emergency temporary commitment pursuant to subsection 5 of section 199.200.

(L. 1961 p. 518 § 2, A.L. 1990 H.B. 1739 merged with S.B. 742, A.L. 1999 H.B. 721 merged with S.B. 261, A.L. 2001 S.B. 266)

Missouri Revised Statutes

Chapter 199

Rehabilitation Center--Head Injury--Tuberculosis Testing

Section *199.190*

August 28, 2002

Patients not to be committed, when.

199.190. No potential transmitter who in his home or other place obeys the rules and regulations of the department of health and senior services for the control of tuberculosis or who voluntarily accepts care in a tuberculosis institution, sanatorium, hospital, his home, or other place and obeys the rules and regulations of the department of health and senior services for the control of contagious tuberculosis shall be committed under the provisions of sections 199.170 to 199.270.

(L. 1961 p. 518 § 8, A.L. 1990 H.B. 1739 merged with S.B. 742)

Missouri Revised Statutes

Chapter 199

Rehabilitation Center--Head Injury--Tuberculosis Testing

Section *199.200*

August 28, 2002

Procedure in circuit court--duties of local prosecuting officers --costs--emergency temporary commitment, procedures.

199.200. 1. Upon filing of the petition, the court shall set the matter down for a hearing either during term time or in vacation, which time shall be not less than five days nor more than fifteen days subsequent to filing. A copy of the petition together with summons stating the time and place of hearing shall be served upon the person three days or more prior to the time set for the hearing. Any X-ray picture and report of any written report relating to sputum examinations certified by the department of health and senior services or local board shall be admissible in evidence without the necessity of the personal testimony of the person or persons making the examination and report.

2. The prosecuting attorney or the city attorney shall act as legal counsel for their respective local boards in this proceeding and such authority is hereby granted. The court shall appoint legal counsel for the individual named in the petition if requested to do so if such individual is unable to employ counsel.

3. All court costs incurred in proceedings under sections 199.170 to 199.270, including examinations required by order of the court but excluding examinations procured by the person named in the petition, shall be borne by the county in which the proceedings are brought.

4. Summons shall be served by the sheriff of the county in which proceedings under sections 199.170 to 199.270 are initiated and return thereof shall be made as in other civil cases.

5. Upon the filing of an ex parte petition for emergency temporary commitment pursuant to subsection 3 of section 199.180, the court shall hear the matter within ninety-six hours of such filing. The local board shall have the authority to detain the individual named in the petition pending the court's ruling on the ex parte petition for emergency temporary commitment. If the petition is granted, the individual named in the petition shall be confined in a facility designated by the curators of the University of Missouri in accordance with section 199.230 until a full hearing pursuant to subsections 1 to 4 of this section is held.

(L. 1961 p. 518 § 3, A.L. 2001 S.B. 266)

Missouri Revised Statutes

Chapter 199
Rehabilitation Center--Head Injury--Tuberculosis Testing
Section *199.210*

August 28, 2002

Rights of patient, witnesses--order of court--transportation costs.

199.210. 1. Upon the hearing set in the order, the individual named in the order shall have a right to be represented by counsel, to confront and cross-examine witnesses against him, and to have compulsory process for the securing of witnesses and evidence in his own behalf. The court may in its discretion call and examine witnesses and secure the production of evidence in addition to that adduced by the parties; such additional witnesses being subject to cross-examination by either or both parties.

2. Upon a consideration of the petition and evidence, if the court finds that the person named in the petition is a potential transmitter and conducts himself so as to be a danger to the public health, an order shall be issued committing the individual named in the petition to a facility designated by the curators of the University of Missouri and directing the sheriff to take him into custody and deliver him to the facility. If the court does not so find, the petition shall be dismissed. The cost of transporting the person to the facility designated by the curators of the University of Missouri shall be paid out of general county funds.

(L. 1961 p. 518 § 4, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1990 H.B. 1739 merged with S.B. 742, A.L. 1996 S.B. 540)

Effective 7-1-96

Missouri Revised Statutes

Chapter 199

Rehabilitation Center--Head Injury--Tuberculosis Testing

Section *199.220*

August 28, 2002

Order appealable.

199.220. The order shall be subject to review at the instance of either party, as in other civil cases.

(L. 1961 p. 518 § 5)

Missouri Revised Statutes

Chapter 199

Rehabilitation Center--Head Injury--Tuberculosis Testing

Section *199.230*

August 28, 2002

Confinement on order, duration.

199.230. Upon commitment, the patient shall be confined in a facility designated by the curators of the University of Missouri until such time as the director of the facility determines that the patient no longer has active tuberculosis or that the patient's discharge will not endanger public health.

(L. 1961 p. 518 § 6, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1996 S.B. 540, A.L. 1999 H.B. 721 merged with S.B. 261)

Missouri Revised Statutes

Chapter 199

Rehabilitation Center--Head Injury--Tuberculosis Testing

Section *199.240*

August 28, 2002

Consent required for medical or surgical treatment.

199.240. No person committed to a facility designated by the curators of the University of Missouri under sections 199.170 to 199.270 shall be required to submit to medical or surgical treatment without his consent, or, if incapacitated, without the consent of his legal guardian, or, if a minor, without the consent of a parent or next of kin.

(L. 1961 p. 518 § 9, A.L. 1971 H.B. 581, A.L. 1983 S.B. 44 & 45, A.L. 1985 S.B. 19, A.L. 1996 S.B. 540)

Effective 7-1-96

Missouri Revised Statutes

Chapter 199

Rehabilitation Center--Head Injury--Tuberculosis Testing

Section *199.250*

August 28, 2002

Facilities to be provided for tuberculosis testing, costs, how paid.

199.250. 1. The department of health and senior services may, by agreement with the curators of the University of Missouri, contract for such facilities at the Missouri rehabilitation center as are necessary to carry out the functions of the tuberculosis testing laboratory and may employ personnel as are necessary for the operation of such laboratory.

2. The expenses incurred in the operation of the tuberculosis testing laboratory at the rehabilitation center or elsewhere shall be paid from state or federal or other funds appropriated for the maintenance and operation of the tuberculosis testing laboratory.

(L. 1961 p. 518 §§ 10, 11, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1991 H.B. 218 merged with S.B. 125 & 341, A.L. 1996 S.B. 540)

Effective 7-1-96

Missouri Revised Statutes

Chapter 199
Rehabilitation Center--Head Injury--Tuberculosis Testing
Section *199.260*

August 28, 2002

Apprehension and return of patient leaving rehabilitation center without discharge.

199.260. Any person committed under the provisions of sections 199.170 to 199.270 who leaves the facility designated by the curators of the University of Missouri without having been discharged by the director of the facility or other officer in charge or by order of court shall be taken into custody and returned thereto by the sheriff of any county where such person may be found, upon an affidavit being filed with the sheriff by the director of the facility, or duly authorized officer in charge thereof, to which the person had been committed.

(L. 1961 p. 518 § 12, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1996 S.B. 540)

Effective 7-1-96

Missouri Revised Statutes

Chapter 199
Rehabilitation Center--Head Injury--Tuberculosis Testing
Section *199.270*

August 28, 2002

Proceedings for release of patient.

199.270. Any time after commitment, the patient or any friend or relative having reason to believe that such patient no longer has contagious tuberculosis or that his discharge will not endanger public health, may institute proceedings by petition, in the circuit court of the county wherein the confinement exists, whereupon the court shall set the matter down for a hearing before him within fifteen days requiring the person or persons to whose care the patient was committed to show cause on a day certain why the patient should not be released. The court shall also require that the patient be allowed the right to be examined prior to the hearing by a licensed physician of his own choice, if so desired, and at his own personal expense. Thereafter all proceedings shall be conducted the same as on the proceedings for commitment with the right of appeal by either party as herein provided; provided, however, such petition for discharge shall not be brought or renewed oftener than once every six months.

(L. 1961 p. 518 § 7)

Missouri Revised Statutes

Chapter 199
Rehabilitation Center--Head Injury--Tuberculosis Testing
Section *199.350*

August 28, 2002

Nursing homes and correctional centers, authority to promulgate rules for testing.

199.350. The department shall have the authority to promulgate rules and regulations which require the preadmission testing for tuberculosis of all residents in nursing homes in the state and the annual testing of all health care workers and volunteers in nursing homes in the state, and residents and staff of state correctional centers. The department shall annually issue screening guidelines on other groups determined by the department to be at high risk for tuberculosis.

(L. 1992 S.B. 511 & 556 § 2)

*Transferred 1994; formerly 198.041

Missouri Regulation Regarding Tuberculosis

19 CSR 20-20—DEPARTMENT OF HEALTH AND SENIOR SERVICES

Division 20—Division of Environmental Health and Communicable Disease Prevention

19 CSR 20-20.020 **Reporting Communicable, Environmental and Occupational Diseases**

PURPOSE: This rule designates the diseases, disabilities, conditions and findings that must be reported to the local health authority or the Department of Health. It also establishes when they must be reported

.PUBLISHER'S NOTE: The publication of the full text of the material that the adopting agency has incorporated by reference in this rule would be unduly cumbersome or expensive. Therefore, the full text of that material will be made available to any interested person at both the Office of the Secretary of State and the office of the adopting agency, pursuant to section 536.031.4, RSMo. Such material will be provided at the cost established by state law.

(1) Category I diseases or findings shall be reported to the local health authority or to the Department of Health within twenty-four (24) hours of first knowledge or suspicion by telephone, facsimile or other rapid communication. Category I diseases or findings are—

(A) Diseases, findings or agents that occur naturally or from accidental exposure:

Diphtheria
Haemophilus influenza, invasive disease
Hantavirus pulmonary syndrome
Hepatitis A
Hyperthermia
Hypothermia
Influenza, suspected—nosocomial outbreaks and public or private school closures
Lead (blood) level greater than or equal to forty-five micrograms per deciliter (=45:g/dl) in any person equal to or less than seventy-two (=72) months of age
Measles (rubeola)
Meningococcal disease, invasive
Outbreaks or epidemics of any illness, disease or condition that may be of public health concern
Pertussis
Poliomyelitis
Rabies, animal or human
Rubella, including congenital syndrome
Staphylococcus aureus, vancomycin resistant
Syphilis, including congenital syphilis
Tuberculosis disease

Typhoid fever
(B) Diseases, findings or agents that occur naturally or that might result from a terrorist attack involving biological, radiological, or chemical weapons:

Adult respiratory distress syndrome
(ARDS) in patients under 50 years of age (without a contributing medical history)
Anthrax
Botulism
Brucellosis
Cholera
Encephalitis, Venezuelan equine
Glanders
Hemorrhagic fever (e.g., dengue, yellow fever)
Plague
Q fever
Ricin
Smallpox (variola)
Staphylococcal enterotoxin B
T-2 mycotoxins
Tularemia

(2) Category II diseases or findings shall be reported to the local health authority or the Department of Health within three (3) days of first knowledge or suspicion. Category II diseases or findings are—

Acquired immunodeficiency syndrome (AIDS)
Arsenic poisoning
Blastomycosis
Campylobacter infections
Carbon monoxide poisoning
CD4+ T cell count
Chancroid
Chemical poisoning, acute, as defined in the most current ATSDR CERCLA Priority List of Hazardous Substances; if terrorism is suspected, refer to section (1)(B)
Chlamydia trachomatis, infections
Creutzfeldt-Jakob disease
Cryptosporidiosis
Cyclosporidiosis
Ehrlichiosis, human granulocytic or monocytic
Encephalitis, arthropod-borne [except VEE, see section (1)(B)]
Escherichia coli O157:H7
Giardiasis
Gonorrhea

Hansen disease (leprosy)
Heavy metal poisoning including, but not limited to, cadmium and mercury
Hemolytic uremic syndrome (HUS), postdiarrhea
Hepatitis B, acute
Hepatitis B surface antigen (prenatal HBsAg) in pregnant women
Hepatitis C
Hepatitis non-A, non-B, non-C
Human immunodeficiency virus (HIV)- exposed newborn infant (i.e., newborn infant whose mother is infected with HIV)
Human immunodeficiency virus (HIV) infection, as indicated by HIV antibody testing (reactive screening test followed by a positive confirmatory test), HIV antigen testing (reactive screening test followed by a positive confirmatory test), detection of HIV nucleic acid (RNA or DNA), HIV viral culture, or other testing that indicates HIV infection
Human immunodeficiency virus (HIV) test results (including both positive and negative results) for children less than two years of age whose mothers are infected with HIV Human immunodeficiency virus (HIV) viral load measurement (including nondetectable results)
Influenza, laboratory-confirmed
Lead (blood) level less than forty-five micrograms per deciliter (<45 :g/dl) in any person equal to or less than seventy-two (=72) months of age and any lead (blood) level in persons older than seventy-two (>72) months of age
Legionellosis
Leptospirosis
Listeria monocytogenes
Lyme disease
Malaria
Methemoglobinemia
Mumps
Mycobacterial disease other than tuberculosis (MOTT)
Nosocomial outbreaks
Occupational lung diseases including silicosis, asbestosis, byssinosis, farmer's lung and toxic organic dust syndrome
Pesticide poisoning
Psittacosis
Respiratory diseases triggered by environmental contaminants including environmentally or occupationally induced asthma and bronchitis
Rocky Mountain spotted fever
Salmonellosis
Shigellosis
Streptococcal disease, invasive, Group A
Streptococcus pneumoniae, drug resistance invasive disease

Tetanus
Toxic shock syndrome, staphylococcal or streptococcal
Trichinosis
Tuberculosis infection
Varicella deaths
Yersinia enterocolitica

(3) The occurrence of an outbreak or epidemic of any illness, disease or condition which may be of public health concern, including any illness in a food handler that is potentially transmissible through food. This also includes public health threats than could result from terrorist activities such as clusters of unusual diseases or manifestations of illness and clusters of unexplained deaths. Such incidents shall be reported to the local health authority or the Department of Health by telephone, facsimile, or other rapid communication within twenty-four (24) hours of first knowledge or suspicion.

(4) A physician, physician's assistant, nurse, hospital, clinic, or other private or public institution providing diagnostic testing, screening or care to any person with any disease, condition or finding listed in sections (1)–(3) of this rule, or who is suspected of having any of these diseases, conditions or findings, shall make a case report to the local health authority or the Department of Health, or cause a case report to be made by their designee, within the specified time.

(A) A physician, physician's assistant, or nurse providing care in an institution to any patient with any disease, condition or finding listed in sections (1)–(3) of this rule may authorize, in writing, the administrator or designee of the institution to submit case reports on patients attended by the physician, physician's assistant, or nurse at the institution. But under no other circumstances shall the physician, physician's assistant, or nurse be relieved of this reporting responsibility.

(B) Duplicate reporting of the same case by health care providers in the same institution is not required.

(5) A case report as required in section (4) of this rule shall include the patient's name, home address with zip code, date of birth, age, sex, race, home phone number, name of disease, condition or finding diagnosed or suspected, the date of onset of the illness, name and address of the treating facility (if any) and the attending physician, any appropriate laboratory results, name and address of the reporter, treatment information for sexually transmitted diseases, and the date of report.

(A) A report of an outbreak or epidemic as required in section (3) of this rule shall include the diagnosis or principal symptoms, the approximate number of cases, the local health authority jurisdiction within which the cases occurred, the identity of any cases known to the reporter, and the name and address of the reporter.

(6) Any person in charge of a public or private school, summer camp or child or adult

care facility shall report to the local health authority or the Department of Health the presence or suspected presence of any diseases or findings listed in sections (1)–(3) of this rule according to the specified time frames.
(7) All local health authorities shall forward to the Department of Health reports of all diseases or findings listed in sections (1)–(3) of this rule. All reports shall be forwarded within twenty-four (24) hours after being received, according to procedures established by the Department of Health director. Reports will be forwarded as expeditiously as possible if a terrorist event is suspected or confirmed. The local health authority shall retain from the original report any information necessary to carry out the required duties in 19 CSR 20-20.040(2) and (3).

(8) Information from patient medical records received by local public health agencies or the Department of Health in compliance with this rule is to be considered confidential records and not public records.

(9) Reporters specified in section (4) of this rule will not be held liable for reports made in good faith in compliance with this rule.

(10) The following material is incorporated into this rule by reference:
(A) Agency for Toxic Substances and Disease Registry (ATSDR) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Priority List of Hazardous Substances (http://www.atsdr.cdc.gov:8080/97list.html)

AUTHORITY: sections 192.006, RSMo Supp. 1999 and 192.020, 192.139, 210.040 and 210.050, RSMo 1994.* This rule was previously filed as 13 CSR 50-101.020. Original rule filed July 15, 1948, effective Sept. 13, 1948. Amended: Filed Sept. 1, 1981, effective Dec. 11, 1981. Rescinded and readopted: Filed Nov. 23, 1982, effective March 11, 1983. Emergency amendment filed June 10, 1983, effective June 20, 1983, expired Sept. 10, 1983. Amended: Filed June 10, 1983, effective Sept. 11, 1983. Amended: Filed Nov. 4, 1985, effective March 24, 1986. Amended: Filed Aug. 4, 1986, effective Oct. 11, 1986. Amended: Filed June 3, 1987, effective Oct. 25, 1987. Emergency amendment filed June 16, 1989, effective June 26, 1989, expired Oct. 23, 1989. Amended: Filed July 18, 1989, effective Sept. 28, 1989. Amended: Filed Nov. 2, 1990, effective March 14, 1991. Emergency amendment filed Oct. 2, 1991, effective Oct. 12, 1991, expired Feb. 8, 1992. Amended: Filed Oct. 2, 1991, effective Feb. 6, 1992. Amended: Filed Jan. 31, 1992, effective June 25, 1992. Amended: Filed Aug. 14, 1992, effective April 8, 1993. Amended: Filed Sept. 15, 1994, effective March 30, 1995. Amended: Filed Sept. 15, 1995, effective April 30, 1996. Emergency amendment filed June 1, 2000, effective June 15, 2000, expired Dec. 11, 2000. Amended: Filed June 1, 2000, effective Nov. 30, 2000.

*Original authority: 192.006.1, RSMo 1993, amended 1995; 192.020, RSMo 1939, amended 1945, 1951; 192.139, RSMo 1988; 210.040, RSMo 1941, amended 1993; and 210.050, RSMo 1941, amended 1993.

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Tuberculosis Symptoms Review List

ENGLISH	PORTUGUESE	ROMANIAN	RUSSIAN	SPANISH	THAI	TURKISH
Tuberculosis Symptom Review List	Lista de sintomas de tuberculose	Simptome in Tuberculoza	Перечень симптомов туберкулёза	Lista de los Síntomas de la Tuberculosis	ตารางทบทวนอาการวัณโรค	Verem Belirtilerinin Toplaminin Listesi
Chest pain	Dor de tórax	Durere in piept	Боли в груди	Dolor del pecho	เจ็บหน้าอก	Göğüs Ağrisi
Chills	Calafrios	Frisoane	Озноб	Escalofríos	หนาว ๆ สั่น ๆ	Titreme
Cough ≥ 3 weeks	Tosse ≥ [a mais de] 3 semanas	Tuse ≥ 3 saptamani	Кашель больше 3 недель	Tos ≥ 3 semanas	ไอมากกว่า 3 สัปดาห์	3 haftadan fazla süren öksürük
Coughing up blood	Tossindo sangue	Tuse cu sange	Отхаркивание кровью	Tos con sangre	ไอเป็นเลือด	Kan Öksürme
Fatigue	Fadiga	Oboseala	Утомление	Fatiga	อาการเหนื่อยอ่อน	Yorgunluk
Fever	Febre	Febra	Жар	Fiebre	มีไข้	Ateş
Loss of appetite	Perda de apetite	Pierderea poftei de mancare	Потеря аппетита	Pérdida del apetito	เบื่ออาหาร	İştahsizlik
Night sweats	Suores noturnos	Transpiratii nocturne	Потливость ночью	Sudores nocturnos	เหงื่อออกตอนกลางคืน	Gece Terlemesi
Productive cough	Tosse produtiva	Tuse productiva	Кашель с мокротой	Tos productiva	อาการไอมีเสมหะ	Balgamli Öksürük
Respiratory difficulty	Dificuldade respiratória	Greutate in respiratie	Затруднённое дыхание	Dificultad respiratoria	มีปัญหาเรื่องระบบหายใจ	Solunum Güçlüğü
Weight Loss	Perda de peso	Scadere in greutate	Потеря веса	Pérdida de peso	น้ำหนักลด	Kilo Kaybi

Developed by the University of Missouri-Columbia Student Health Center Prevention Team.
Funding for translation project provided by the Centers for Disease Control and Prevention and Missouri Department of Health and Senior Services.
Translated from English by Culture Guides, Inc.

Tuberculosis Symptoms Review List

ENGLISH	ARABIC	CHINESE	FRENCH	GERMAN	JAPANESE	KOREAN	MALAY
Tuberculosis Symptoms Review List	اعراض مرض السل تشتمل على:	肺结核症状－表	Symptômes de la Tuberculose (pulmonaire)	Liste von Symptomen der Tuberkulose ("Schwindsucht")	結核症状観察リスト	결핵 증상 점검표	Batuk kering-tanda-tanda aduan sakit
Chest pain	آلم في الصدر	胸痛	Mal à la poitrine, douleur	Brustschmerzen	胸痛	가슴통증	Sakit dada
Chills	الاحساس بالبرد القشعريرة	寒颤	Frissons	Fieberhafte Erkältung	寒気	오한	Rasa kesejukan
Cough ≥ 3 weeks	السعال (المدة ٣ اسابيع او اكثر)	咳嗽三周以上	Toux de plus de 3 semaines	Husten mehr als drei Wochen	３週間以上続く咳	3주이상 기침	Batuk ≥ 3 minggu
Coughing up blood	خروج دم مع السعال	咳血	Tousser avec du sang dans les crachats	Husten mit blutigem Auswurf	喀血	피를 토하는 기침	Batuk berdarah
Fatigue	الارهاق - الاحساس بالاجهاد والتعب	疲倦	Fatigue	Müdigkeit	疲労感	피로	Letih dan lesu
Fever	الحمى - ارتفاع درجة الحرارة	发烧	Fièvre	Fieber	熱	고열	Demam panas
Loss of appetite	انعدام الشهية او نقصانها	食欲减退	Perte d'appétit	Appetitslosigkeit	食欲不振	식욕감퇴	Tiada selera makan
Night sweats	تصبب العرق اثناء النوم	夜间盗汗	Sueur (transpiration) nocturne	Nachtschweiß	寝汗	취침중 땀을 많이 흘림	Berpeluh waktu malam
Productive cough	السعال المنتج للبلغم	咳中带血	Toux grasse	Husten mit Auswurf (von Schleim)	痰等の出る咳	기침생성	Batuk berkahak
Respiratory difficulty	ضيق في التنفس	呼吸困难	Difficultés respiratoires (Gêne dans la respiration)	Atmungsschwierigkeiten	呼吸困難	호흡곤란	Kesukaran untuk bernafas
Weight Loss	نقصان الوزن	体重减轻	Perte de poids	Gewichtsabnahme	体重減少	체중감소	Kurang berat badan

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Tuberculosis Medication Side Effects

ENGLISH	PORTUGUESE	ROMANIAN	RUSSIAN	SPANISH	THAI	TURKISH
Tuberculosis Medication Side Effects	Efeitos Colaterais de Medicamentos para Tuberculose	Efecte secundare ale tratamentului in tuber	Побочные эффекты лекарств от туберкулёза	Efectos secundarios al tratamiento de tuberculosis	อาการข้างเคียงของวัณโรค	Verem ilacinin yan etkileri
Abdominal pain	Dor abdominal	Durere abdominala	Боль в животе	Dolor abdominal	อาการปวดท้องท้อง	Karin Ağrisi
Dark brown urine	Urina marrom-escura	Urina de culoare maroniu inchis	Тёмно коричневая моча	Orina marrón oscura	ปัสสาวะเป็นสีน้ำตาล	Koyu Kahverengi İdrar
Diarrhea	Diarréia	Diaree	Понос	Diarrhea	อุจจาระร่วง	İshal
Headaches	Dores de cabeça	Dureri de cap	Головная боль	Dolor de cabeza	อาการปวดศีรษะ	Başağrisi
Joint aches (PZA)	Dores nas juntas ([Pyrazinamide] PZA)	Dureri articulare	Боль в суставах	Dolores de las articulaciones (PZA)	ปวดตามข้อ	Eklem Ağrilari
Nausea	Náuseas	Greata	Тошнота	Náusea	อาการคลื่นไส้ อาการวิงเวียน	Mide Bulantisi
Numbness/ Tingling of hands/feet	Entorpecimento / formigamento de mãos / pés	Amorteli/Furnicaturi in maini/picioare	Онемение конечностей	Adormecimiento/ hormigueo de las manos y pies	อาการชาและปวดเสียวตามมือและเท้า	El ve Ayaklarda Uyuşukluk Karincalanma
Rash/ Itching	Erupção cutânea / coceira	Eruptie cutanata/ Mancarime	Сыпь/Чесотка	Erupciones cutáneas y comezón	อาการผื่นคัน	Deri Döküntüsü Kaşinma
Visual changes (EMB)	Mudanças Visuais ([ethambutol] EMB)	Tulburari de vedere	Изменение зрения	Cambios en la visión (EMB)	สายตาเปลี่ยน	Görüş Bozukluklari
Vomiting	Vómito	Varsaturi	Рвота	Vómitos	อาเจียร	Kusma
Jaundice	Icterícia	Icter	Желтуха	Ictericia	โรคดีซ่าน	Sarilik

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Tuberculosis Medication Side Effects

ENGLISH	ARABIC	CHINESE	FRENCH	GERMAN	JAPANESE	KOREAN	MALAY
Tuberculosis Medication Side Effects	الاعراض الجانبية لتناول الادوية الخاصة بعلاج السل:	肺结核药物副作用	Réactions secondaires de la médication	Nebenwirkungen von Medicamenten der Tuberkulose	抗結核剤副作用	결핵치료제 부작용	Kesan sampingan ubat batuk kering
Abdominal pain	الم في منطقة البطن	腹痛	Douleurs abdominales (Mal à l'abdomen)	Unterleibsschmerzen	腹部の痛み	복부통증	Sakit perut
Dark brown urine	اختلاف لون البول الى بني غامق او اسود	尿色深黄	Urine marron foncé	Dunkler brauner Urin	濃い茶色の尿	흑갈색 소변	Air kencing warna coklat pekat
Diarrhea	الاصابة بالاسهال	腹泻	Diarrhée	Durchfall	下痢	설사	Cirit-birit
Headaches	الصداع	头痛	Maux de tête, mal à la tête	Kopfschmerzen	頭痛	두통	Sakit kepala
Joint aches (PZA)	الم في المفاصل	关节痛	Mal aux joints (point d'articulation)	Schmerzen der Gelenke	関節痛	관절통	Sakit sendi
Nausea	الغثيان	反胃	Nausée, envie de vomir	Übelkeit	むかつき	메스꺼움	Rasa mual
Numbness/ Tingling of hands/feet	الاحساس بالخدر - او الوخز لخفيف (النمل) في اليدين	手脚麻木 / 刺痛	Engourdissement/ Picotements des mains/jambes (fourmillements)	Taubheit / Kribbeln der Hände / Füße	手足の無感覚／ひりひりする感覚	수족마비	Kebas
Rash/ itching	الطفح الجلدي/الحكة	出疹子/发痒	Eruption/ démangeaisons	Hautausschlag / Jucken	発疹／かゆみ	발진, 가려움	Ruam/gatal-gatal
Visual changes (EMB)	اختلاف بصري - في قدرة العينين	视力改变	Change de la vision	Sehstörungen	視覚変化	시력감퇴	Kabur penglihatan
Vomiting	القيء	呕吐	Vomissements	Erbrechen	嘔吐	구토	Muntah-muntah
Jaundice	اليرقان - اصفرار الجلد او بياض العينين	黄胆	Jaunisse, ictère	Gelbsucht	黄疸	황달	Sakit kuning

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Appendix 7:
MISSOURI LAWS

REHABILITATION CENTER—HEAD INJURY—TUBERCULOSIS TESTING AND COMMITMENT

199.170. Definitions. —The following terms, as used in sections 199.170 to 199.270, mean:

(1) "Active tuberculosis", tuberculosis disease that is demonstrated to be contagious by clinical, bacteriological, or radiological evidence. Tuberculosis is considered active until cured.

(2) "Cure" or "treatment to cure", the completion of a recommended course of therapy as defined in subdivision (5) of this section and as determined by the attending physician.

(3) "Local board", any legally constituted local city or county board of health or health center board of trustees or the director of health of the city of Kansas City or the commissioner of health of the city of St. Louis, or in the absence of such board, the county commission or the county board of tuberculosis hospital commissioners of any county.

(4) "Potential transmitter", any person who has the diagnosis of pulmonary tuberculosis but has not begun a recommended course of therapy, or who has the diagnosis of pulmonary tuberculosis and has started a recommended course of therapy but has not completed the therapy. This status applies to any individual with tuberculosis, regardless of his or her current bacteriologic status.

(5) "Recommended course of therapy", a regimen of antituberculosis chemotherapy in accordance with medical standards of the American Thoracic Society and the Centers for Disease Control and Prevention. (L. 1961 p. 518 § 1, A.L. 1986 H.B. 1554 Revision, A.L. 1990 H.B. 1739 and S.B. 742, A.L. 1999 H.B. 721 and S.B. 261)

COMMITMENT AND HOSPITALIZATION OF TUBERCULOSIS PATIENTS

199.180. Local health agency may institute proceedings for commitment. —A person found to have tuberculosis shall follow the instructions of the local board, shall obtain the required treatment, and shall minimize the risk of infecting others with tuberculosis. When a person with active tuberculosis, or a person who is a potential transmitter, violates the rules, regulations, instructions, or orders promulgated by the department of health or the local board, and is thereby conducting himself or herself so as to expose

other persons to danger of infection, after having been directed by the local board to comply with such rules, regulations, instructions, or orders, the local board may institute proceedings by petition, for commitment, returnable to the circuit court of the county in which such person resides, or if the person be a nonresident or has no fixed place of abode, then in the county in which the person is found. Strictness of pleading shall not be required and a general allegation that the public health requires commitment of the person named therein shall be sufficient. (L. 1961 p. 518 § 2, A.L. 1990 H.B. 1739 and S.B. 742, A.L. 1999 H.B. 721 and S.B. 261)

199.190. Patients not to be committed, when. —No potential transmitter who in his home or other place obeys the rules and regulations of the department of health for the control of tuberculosis or who voluntarily accepts care in a tuberculosis institution, sanatorium, hospital, his home, or other place and obeys the rules and regulations of the department of health for the control of contagious tuberculosis shall be committed under the provisions of sections 199.170 to 199.270. (L. 1961 p. 518 § 8, A.L. 1990 H.B. 1739 and S.B. 742)

199.200. Procedure in circuit court—duties of local prosecuting officers—costs. —1. Upon filing of the petition, the court shall set the matter down for a hearing either during term time or in vacation, which time shall be not less than five days nor more than fifteen days subsequent to filing. A copy of the petition together with summons stating the time and place of hearing shall be served upon the person three days or more prior to the time set for the hearing. Any X-ray picture and report of any written report relating to sputum examinations certified by the department of health shall be admissible in evidence without the necessity of the personal testimony of the person or persons making the examination and report.

2. The prosecuting attorney or the city attorney shall act as legal counsel for their respective local boards in this proceeding and such authority is hereby granted. The court shall appoint legal counsel for the individual named in the petition if requested to do so if such individual is unable to employ counsel.

3. All court costs incurred in proceedings under sections 199.170 to 199.270, including examinations required by order of the court but excluding examinations procured by the person named in the petition, shall be borne by the county in which the proceedings are brought.

4. Summons shall be served by the sheriff of the county in which proceedings under sections 199.170 to 199.270 are initiated and return thereof shall be made as in other civil cases. (L. 1961 p. 518 § 3)

199.210. Rights of patient, witnesses—order of court—transportation costs. —1. Upon the hearing set in the order, the individual named in the order shall have a right to be represented by counsel, to confront and cross-examine witnesses against him, and to have compulsory process for the securing of witnesses and evidence in his own behalf. The court may in its discretion call and examine witnesses and secure the production of evidence in addition to that adduced by the parties; such additional witnesses being subject to cross
Examination by either or both parties.

2. Upon a consideration of the petition and evidence, if the court finds that the person named in the petition is a potential transmitter and conducts himself so as to be a danger to the public health, an order shall be issued committing the individual named in the petition to a facility designated by the curators of the University of Missouri and directing the sheriff to take him into custody and deliver him to the facility. If the court does not so find, the petition shall be dismissed. The cost of transporting the person to the facility designated by the curators of the University of Missouri shall be paid out of general county funds.

(L. 1961 p. 518 § 4, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1990 H.B. 1739 and S.B. 742, A.L. 1996 S.B. 540) Effective 4-1-96

199.220. Order appealable. —The order shall be subject to review at the instance of either party, as in other civil cases. (L. 1961 p. 518 § 5)

199.230. Confinement on order, duration. —Upon commitment, the patient shall be confined in a facility designated by the curators of the University of Missouri until such time as the director of the facility determines that the patient no longer has active tuberculosis or that the patient's discharge will not endanger public health. (L. 1961 p. 518 § 6, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A. L. 1996 S.B. 540, A.L. 1999 H.B. 721 and S.B. 261)

199.240. Consent required for medical or surgical treatment. —No person committed to a facility designated by the curators of the University of Missouri under sections 199.170 to 199.270 shall be required to submit to medical or surgical treatment without his consent, or, if incapacitated, without the consent of his legal guardian, or, if a minor, without the consent of a parent or next of kin.
(L. 1961 p. 518 § 9, A.L. 1971 H.B. 581, A.L. 1983 S.B. 44 & 45, A.L. 1985 S.B. 19, A.L. 1996 S.B. 540)) Effective 4-1-96.

199.250. Facilities to be provided for tuberculosis testing, costs, how paid. —1. The department of health may, by agreement with the curators of the University of Missouri, contract for such facilities at the Missouri rehabilitation center as are necessary to carry out the functions of the tuberculosis testing laboratory and may employ personnel as are

necessary for the operation of such laboratory.

2. The expenses incurred in the operation of the tuberculosis-testing laboratory at the rehabilitation center or elsewhere shall be paid from state or federal or other funds appropriated for the maintenance and operation of the tuberculosis-testing laboratory. (L. 1961 p. 518 §§ 10, 11, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1991 H.B. 218 and S.B. 125 & 341, A.L. 1996 S.B. 540) Effective 4-1-96

199.260. Apprehension and return of patient leaving rehabilitation center without discharge. —Any person committed under the provisions of sections 199.170 to 199.270 who leaves the facility designated by the curators of the University of Missouri without having been discharged by the director of the facility or other officer in charge or by order of court shall be taken into custody and returned thereto by the sheriff of any county where such person may be found, upon an affidavit being filed with the sheriff by the director of the facility, or duly authorized officer in charge thereof, to which the person had been committed. (L. 1961 p. 518 § 12, A.L. 1971 H.B. 581, A.L. 1985 S.B. 19, A.L. 1996 S.B. 540) Effective 4-1-96

199.270. Proceedings for release of patient. —Any time after commitment, the patient or any friend or relative having reason to believe that such patient no longer has contagious tuberculosis or that his discharge will not endanger public health, may institute proceedings by petition, in the circuit court of the county wherein the confinement exists, whereupon the court shall set the matter down for a hearing before him within fifteen days requiring the person or persons to whose care the patient was committed to show cause on a day certain why the patient should not be released. The court shall also require that the patient be allowed the right to be examined prior to the hearing by a licensed physician of his own choice, if so desired, and at his own personal expense. Thereafter all proceedings shall be conducted the same as on the proceedings for commitment with the right of appeal by either party as herein provided; provided, however, such petition for discharge shall not be brought or renewed oftener than once every six months. (L. 1961 p. 518 § 7)

TUBERCULOSIS TESTING

***199.350. Nursing homes and correctional centers, authority to promulgate rules for testing. —**The department shall have the authority to promulgate rules and regulations which require the preadmission testing for tuberculosis of all residents in nursing homes in the state and the annual testing of all health care workers and volunteers in nursing homes in the state, and residents and staff of state correctional centers. The department shall annually issue screening guidelines on other groups determined by the department

to be at high risk for tuberculosis. (L. 1992 S.B. 511 & 556 § 2)

*Transferred 1994; formerly 198.041

Appendix 8:

Missouri Department of Health and Senior Services
Tuberculosis Case Management Manual

MISSOURI RULES

19 CSR 20-20.100 Tuberculosis Testing for Residents and Workers in Long-Term Care Facilities and State Correctional Centers

PURPOSE: This rule establishes tuberculosis testing requirements for residents and workers in long-term care facilities and state correctional centers.

(1) General Requirements. Long-term care facilities and state correctional centers shall screen their residents and staff for tuberculosis using the Mantoux method purified protein derivative (PPD) five tuberculin unit (5 TU) test. Each facility shall be responsible for ensuring that all test results are completed and that documentation is maintained for all residents, employees, and volunteers.

(A) In interpreting this rule, long-term care facilities shall include employees, volunteers, and residents of residential care facilities I, residential care facilities II, intermediate care facilities and skilled nursing facilities as defined in section 198.006, RSMo.

(B) In interpreting this rule, state correctional centers shall include all employees and volunteers of the Missouri Department of Corrections and the residents of all correctional institutions operated by the Missouri Department of Corrections.

(C) Whenever tuberculosis is suspected or confirmed, or tuberculosis infection is diagnosed among residents, employees or volunteers, the Department of Health or local health authority shall be notified as required in 19 CSR 20-20.020(2).

(2) Long-Term Care Residents. Within one (1) month prior to or one (1) week after admission, all residents new to long-term care are required to have the initial test of a Mantoux PPD two (2)-step tuberculin test. If the initial test is negative, zero to nine millimeters (0–9 mm), the second test, which can be given after admission, should be given one to three (1)–(3) weeks later. Documentation of chest X-ray evidence ruling out tuberculosis disease within one (1) month prior to admission, along with an evaluation to rule out signs and symptoms compatible with infectious tuberculosis, may be accepted by the facility on an interim basis until the Mantoux PPD two (2)-step test is completed.

(A) All skin test results are to be documented in millimeters (mm) of induration.

(B) Bacillus of Calmette and Guerin (BCG) vaccination shall not prevent residents from receiving a tuberculin test.

(C) A reaction of ten millimeters (10 mm) or more shall be considered as infected with *Mycobacterium tuberculosis* for an individual with a history of BCG vaccination.

(D) Evidence of tuberculosis infection is considered to be a reaction of five millimeters (5 mm) or more for all contacts to infectious tuberculosis or for an individual who is immunosuppressed or has abnormal chest X-ray findings

consistent with old healed tuberculosis disease, and ten millimeters (10 mm) or more for all others.

(E) Residents with a negative, zero to nine millimeters (0–9 mm), Mantoux PPD two (2)-step test need not be routinely retested unless exposed to infectious tuberculosis or they develop signs and symptoms which are compatible with tuberculosis disease.

(F) Residents with a documented history of tuberculosis infection or an adequate course of preventive treatment shall not be required to be retested. Residents with a documented history of tuberculosis disease and adequate chemotherapy shall not be required to be retested. In the absence of documentation, a repeat test shall be required.

(G) All skin test results of five millimeters (5 mm) or more for contacts to infectious tuberculosis or for an individual who is immunocompromised, or ten millimeters (10 mm) or more for all others, shall require a chest X ray within one (1) week, or a review of the results of a chest X ray taken within the month prior to admission along with an evaluation to rule out signs and symptoms compatible with tuberculosis disease to rule out active pulmonary disease.

(H) Individuals with a positive finding presenting evidence of a recent, within one (1) month of the date of admission, chest X ray need not be given a new X ray. However, the results of the X ray must be reviewed in the light of the additional information of the identification of tuberculosis infection as indicated by the Mantoux PPD skin test.

(I) An individual who is skin-test positive with a normal chest X ray should be considered for preventive medication. Those who complete a recommended course of preventive treatment and those for whom preventive treatment is not medically indicated need have no further testing for tuberculosis unless signs and symptoms which are compatible with tuberculosis disease are present.

(J) All residents of long-term care facilities who are exposed to a case of infectious tuberculosis or who develop signs and symptoms, which are compatible with tuberculosis disease, shall be medically evaluated. All long-term care facility residents shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.

(3) Long-Term Care Employees and Volunteers. All new long-term care facility employees and volunteers who work ten (10) or more hours per week are required to obtain a Mantoux PPD two (2)-step tuberculin test within one (1) month prior to starting employment in the facility. If the initial test is zero to nine millimeters (0–9 mm), the second test should be given as soon as possible within three (3) weeks after employment begins, unless documentation is provided indicating a Mantoux PPD test in the past and at least one (1) subsequent annual test within the past two (2) years. It is the responsibility of each facility to maintain a documentation of each employee's and volunteer's tuberculin status.

(A) All skin test results are to be documented in millimeters (mm) of induration.
(B) BCG vaccination shall not prevent employees and volunteers from receiving a tuberculin test.
(C) For an individual with a history of BCG vaccination, a reaction of ten millimeters (10 mm) or more shall be considered as infected with *Mycobacterium tuberculosis*.
(D) Evidence of tuberculosis infection is considered to be a reaction of five millimeters (5 mm) or more for all contacts to infectious tuberculosis or for an individual who is immunosuppressed or has abnormal chest X-ray findings consistent with old healed tuberculosis disease, and ten millimeters (10 mm) or more for all others.
(E) Employees and volunteers with an initial zero to nine millimeters (0–9 mm) Mantoux PPD two (2)-step test shall be one (1)-step tuberculin tested annually and the results recorded in a permanent record.
(F) Employees and volunteers with a documented history of a positive Mantoux PPD test shall not be required to be retested. In the absence of documentation, a repeat test shall be required.
(G) All positive findings shall require a chest X ray to rule out active pulmonary disease.
(H) Individuals with a positive finding need not have repeat annual chest X-rays. They shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.
(I) An individual who is skin-test positive with a normal chest X ray should be considered for preventive medication. Those who complete a recommended course of preventive medication need have no further testing for tuberculosis unless signs and symptoms, which are compatible with tuberculosis disease, are present.
(J) All employees and volunteers of long-term care facilities who are exposed to a case of infectious tuberculosis or who develop signs and symptoms, which are compatible with tuberculosis disease, shall be medically evaluated. All employees or volunteers of these facilities shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.

(4) State Correctional Centers Residents. All residents of state correctional centers are required to obtain a Mantoux PPD two (2)-step tuberculin test upon admission to rule out tuberculosis. If the initial test is negative, zero to nine millimeters (0–9 mm), the second test should be given within ninety (90) days of entrance into the state correctional system.
(A) All skin test results are to be documented in millimeters (mm) of induration.
(B) BCG vaccination shall not prevent residents from receiving a tuberculin test.
(C) For an individual with a history of BCG vaccination, a reaction of ten millimeters (10 mm) or more shall be considered as infected with *Mycobacterium tuberculosis*.

(D) A positive test is defined as having a reaction of five millimeters (5 mm) or more for all contacts to infectious tuberculosis or for an individual who is immunosuppressed or has abnormal chest X-ray findings consistent with old healed tuberculosis disease, and ten millimeters (10 mm) or more for all others.

(E) Individuals with an initial negative zero to nine millimeters (0–9 mm) Mantoux PPD two (2)-step test shall be one (1)-step tuberculin tested annually and the results recorded in a permanent record.

(F) Individuals with a documented history of a positive Mantoux PPD test shall not be required to be retested. In the absence of documentation, a repeat test shall be required.

(G) All positive findings shall require a chest X ray to rule out active pulmonary disease.

(H) Individuals with a positive finding need not have repeat annual chest X rays. They shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.

(I) An individual who is skin-test positive with a normal chest X ray should be considered for preventive medication. Those who complete a recommended course of preventive medication need have no further testing for tuberculosis unless signs and symptoms, which are compatible with tuberculosis disease, are present.

(J) All residents of state correctional centers who are exposed to a case of infectious tuberculosis or who develop signs and symptoms, which are compatible with tuberculosis disease, shall be medically evaluated. All residents shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.

(5) Missouri Department of Corrections New Employees and Volunteers. All new employees and volunteers who work ten (10) or more hours per week for the Missouri Department of Corrections are required to obtain a Mantoux PPD two (2)-step tuberculin test within three (3) weeks of starting employment. If the initial test is negative, zero to nine millimeters (0–9 mm), the second test should be given one to three (1–3) weeks after the initial test. It is the responsibility of each state correctional center to maintain documentation of each employee's or volunteer's tuberculin status.

(A) All skin test results are to be documented in millimeters (mm) of induration.

(B) BCG vaccination shall not prevent new employees and volunteers from receiving a tuberculin test.

(C) For an individual with a history of BCG vaccination, a significant reaction of ten millimeters (10 mm) or more shall be considered as infected with *Mycobacterium tuberculosis.*

(D) A positive test is defined as having a reaction of five millimeters (5 mm) or more for all contacts to infectious tuberculosis or for an individual who is immunosuppressed or has abnormal chest X-ray findings consistent with old healed tuberculosis disease, and ten millimeters (10 mm) or more for all others.

(E) Employees and volunteers with a negative zero to nine millimeters (0–9 mm) Mantoux PPD two (2)-step test shall be one (1)-step tuberculin tested annually and the results recorded in a permanent record.

(F) Employees and volunteers with a documented history of a positive Mantoux PPD test shall not be required to be retested. In the absence of documentation, a repeat test shall be required.

(G) All positive findings shall require a chest X ray to rule out active pulmonary disease.

(H) Individuals with a positive finding need not have repeat annual chest X rays. They shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.

(I) An individual who is skin test positive with a normal chest X ray should be considered for preventive medication. Those who complete a recommended course of preventive medication need have no further testing for tuberculosis unless signs and symptoms, which are compatible with tuberculosis disease, are present.

(J) All employees and volunteers of state correctional centers who are exposed to a case of infectious tuberculosis or who develop signs and symptoms, which are compatible with tuberculosis disease, shall be medically evaluated. All employees and volunteers shall have a documented annual evaluation to rule out signs and symptoms of tuberculosis disease.

(6) This rule will expire June 30, 2000.

AUTHORITY: section 199.350, RSMo 1994.* Original rule filed April 17, 1995, effective Nov. 30, 1995.

Appendix 9:
19 CSR 20-20—DEPARTMENT OF HEALTH AND SENIOR SERVICES

Division 20—Division of Environmental Health and Communicable Disease

Missouri Department of Health and Senior Services
Tuberculosis Case Management Manual

Prevention

19 CSR 20-20.020 **Reporting Communicable, Environmental and Occupational Diseases**

PURPOSE: This rule designates the diseases, disabilities, conditions and findings that must be reported to the local health authority or the Department of Health and Senior Services. It also establishes when they must be reported.

.PUBLISHER'S NOTE: The publication of the full text of the material that the adopting agency has incorporated by reference in this rule would be unduly cumbersome or expensive. Therefore, the full text of that material will be made available to any interested person at both the Office of the Secretary of State and the office of the adopting agency, pursuant to section 536.031.4, RSMo. Such material will be provided at the cost established by state law.

(1) Category I diseases or findings shall be reported to the local health authority or to the Department of Health within twenty-four (24) hours of first knowledge or suspicion by telephone, facsimile or other rapid communication. Category I diseases or findings are—

(A) Diseases, findings or agents that occur naturally or from accidental exposure:
Diphtheria
Haemophilus influenza, invasive disease
Hantavirus pulmonary syndrome
Hepatitis A
Hyperthermia
Hypothermia
Influenza, suspected—nosocomial outbreaks and public or private school closures
Lead (blood) level greater than or equal to forty-five micrograms per deciliter (=45:g/dl) in any person equal to or less than seventy-two (=72) months of age
Measles (rubeola)
Meningococcal disease, invasive outbreaks or epidemics of any illness, disease or condition that may be of public health concern
Pertussis
Poliomyelitis
Rabies, animal or human
Rubella, including congenital syndrome
Staphylococcus aureus, vancomycin resistant
Syphilis, including congenital syphilis
Tuberculosis disease
Typhoid fever

(B) Diseases, findings or agents that occur naturally or that might result from a terrorist attack involving biological, radiological, or chemical weapons:

Adult respiratory distress syndrome
(ARDS) in patients under 50 years of age (without a contributing medical history)
Anthrax
Botulism
Brucellosis
Cholera
Encephalitis, Venezuelan equine
Glanders
Hemorrhagic fever (e.g., dengue, yellow fever)
Plague
Q fever
Ricin
Smallpox (variola)
Staphylococcal enterotoxin B
T-2 mycotoxins
Tularemia

(2) Category II diseases or findings shall be reported to the local health authority or the Department of Health within three (3) days of first knowledge or suspicion. Category II diseases or findings are—

Acquired immunodeficiency syndrome (AIDS)
Arsenic poisoning
Blastomycosis
Campylobacter infections
Carbon monoxide poisoning
CD4+ T cell count
Chancroid
Chemical poisoning, acute, as defined in the most current ATSDR CERCLA Priority List of Hazardous Substances; if terrorism is suspected, refer to section (1)(B)
Chlamydia trachomatis, infections
Creutzfeldt-Jakob disease
Cryptosporidiosis
Cyclosporidiosis
Ehrlichiosis, human granulocytic or monocytic
Encephalitis, arthropod-borne [except VEE, see section (1)(B)]
Escherichia coli O157:H7
Giardiasis

Gonorrhea
Hansen disease (leprosy)
Heavy metal poisoning including, but not limited to, cadmium and mercury
Hemolytic uremic syndrome (HUS), postdiarrhea
Hepatitis B, acute
Hepatitis B surface antigen (prenatal HBsAg) in pregnant women
Hepatitis C
Hepatitis non-A, non-B, non-C
Human immunodeficiency virus (HIV)- exposed newborn infant (i.e., newborn infant whose mother is infected with HIV)
Human immunodeficiency virus (HIV) infection, as indicated by HIV antibody testing (reactive screening test followed by a positive confirmatory test), HIV antigen testing (reactive screening test followed by a positive confirmatory test), detection of HIV nucleic acid (RNA or DNA), HIV viral culture, or other testing that indicates HIV infection
Human immunodeficiency virus (HIV) test results (including both positive and negative results) for children less than two years of age whose mothers are infected with HIV Human immunodeficiency virus (HIV) viral load measurement (including nondetectable results)
Influenza, laboratory-confirmed
Lead (blood) level less than forty-five micrograms per deciliter (<45 :g/dl) in any person equal to or less than seventy-two (=72) months of age and any lead (blood) level in persons older than seventy-two (>72) months of age
Legionellosis
Leptospirosis
Listeria monocytogenes
Lyme disease
Malaria
Methemoglobinemia
Mumps
Mycobacterial disease other than tuberculosis (MOTT)
Nosocomial outbreaks
Occupational lung diseases including silicosis, asbestosis, byssinosis, farmer's lung and toxic organic dust syndrome
Pesticide poisoning
Psittacosis
Respiratory diseases triggered by environmental contaminants including environmentally or occupationally induced asthma and bronchitis
Rocky Mountain spotted fever
Salmonellosis
Shigellosis
Streptococcal disease, invasive, Group A

Streptococcus pneumoniae, drug resistance invasive disease
Tetanus
Toxic shock syndrome, staphylococcal or streptococcal
Trichinosis
Tuberculosis infection
Varicella deaths
Yersinia enterocolitica

(3) The occurrence of an outbreak or epidemic of any illness, disease or condition which may be of public health concern, including any illness in a food handler that is potentially transmissible through food. This also includes public health threats than could result from terrorist activities such as clusters of unusual diseases or manifestations of illness and clusters of unexplained deaths. Such incidents shall be reported to the local health authority or the Department of Health by telephone, facsimile, or other rapid communication within twenty-four (24) hours of first knowledge or suspicion.

(4) A physician, physician's assistant, nurse, hospital, clinic, or other private or public institution providing diagnostic testing, screening or care to any person with any disease, condition or finding listed in sections (1)–(3) of this rule, or who is suspected of having any of these diseases, conditions or findings, shall make a case report to the local health authority or the Department of Health, or cause a case report to be made by their designee, within the specified time.

(A) A physician, physician's assistant, or nurse providing care in an institution to any patient with any disease, condition or finding listed in sections (1)–(3) of this rule may authorize, in writing, the administrator or designee of the institution to submit case reports on patients attended by the physician, physician's assistant, or nurse at the institution. But under no other circumstances shall the physician, physician's assistant, or nurse be relieved of this reporting responsibility.

(B) Duplicate reporting of the same case by health care providers in the same institution is not required.

(5) A case report as required in section (4) of this rule shall include the patient's name, home address with zip code, date of birth, age, sex, race, home phone number, name of disease, condition or finding diagnosed or suspected, the date of onset of the illness, name and address of the treating facility (if any) and the attending physician, any appropriate laboratory results, name and address of the reporter, treatment information for sexually transmitted diseases, and the date of report.

(A) A report of an outbreak or epidemic as required in section (3) of this rule shall include the diagnosis or principal symptoms, the approximate number of cases, the local health authority jurisdiction within which the cases occurred, the identity of any cases known to the reporter, and the name and address of the reporter.

(6) Any person in charge of a public or private school, summer camp or child or adult care facility shall report to the local health authority or the Department of Health the presence or suspected presence of any diseases or findings listed in sections (1)–(3) of this rule according to the specified time frames.

(7) All local health authorities shall forward to the Department of Health reports of all diseases or findings listed in sections (1)–(3) of this rule. All reports shall be forwarded within twenty-four (24) hours after being received, according to procedures established by the Department of Health director. Reports will be forwarded as expeditiously as possible if a terrorist event is suspected or confirmed. The local health authority shall retain from the original report any information necessary to carry out the required duties in 19 CSR 20-20.040(2) and (3).

(8) Information from patient medical records received by local public health agencies or the Department of Health in compliance with this rule is to be considered confidential records and not public records.

(9) Reporters specified in section (4) of this rule will not be held liable for reports made in good faith in compliance with this rule.

(10) The following material is incorporated into this rule by reference:

(A) Agency for Toxic Substances and Disease Registry (ATSDR) Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Priority List of Hazardous Substances (http://www.atsdr.cdc.gov:8080/97list.html)

AUTHORITY: sections 192.006, RSMo Supp. 1999 and 192.020, 192.139, 210.040 and 210.050, RSMo 1994.* This rule was previously filed as 13 CSR 50-101.020. Original rule filed July 15, 1948, effective Sept. 13, 1948. Amended: Filed Sept. 1, 1981, effective Dec. 11, 1981. Rescinded and readopted: Filed Nov. 23, 1982, effective March 11, 1983. Emergency amendment filed June 10, 1983, effective June 20, 1983, expired Sept. 10, 1983. Amended: Filed June 10, 1983, effective Sept. 11, 1983. Amended: Filed Nov. 4, 1985, effective March 24, 1986. Amended: Filed Aug. 4, 1986, effective Oct. 11, 1986. Amended: Filed June 3, 1987, effective Oct. 25, 1987. Emergency amendment filed June

16, 1989, effective June 26, 1989, expired Oct. 23, 1989. Amended: Filed July 18, 1989, effective Sept. 28, 1989. Amended: Filed Nov. 2, 1990, effective March 14, 1991. Emergency amendment filed Oct. 2, 1991, effective Oct. 12, 1991, expired Feb. 8, 1992. Amended: Filed Oct. 2, 1991, effective Feb. 6, 1992. Amended: Filed Jan. 31, 1992, effective June 25, 1992. Amended: Filed Aug. 14, 1992, effective April 8, 1993. Amended: Filed Sept. 15, 1994, effective March 30, 1995. Amended: Filed Sept. 15, 1995, effective April 30, 1996. Emergency amendment filed June 1, 2000, effective June 15, 2000, expired Dec. 11, 2000. Amended: Filed June 1, 2000, effective Nov. 30, 2000.

*Original authority: 192.006.1, RSMo 1993, amended 1995; 192.020, RSMo 1939, amended 1945, 1951; 192.139, RSMo 1988; 210.040, RSMo 1941, amended 1993; and 210.050, RSMo 1941, amended 1993.